



THE NEW PALACE EMPORIUM
ON THE HISTORIC SLOPE OF BRICKFIELD HILL.

“WHILE I LIVE I’LL GROW”



Being an Account of the:
Foundation and Growth of
AUSTRALIA'S
MAMMOTH BUSINESS

ANTHONY HORDERN & SONS
ONLY UNIVERSAL PROVIDERS
SYDNEY, N. S. W.



Anthony Hordern and Sons' London Offices, 9 Golden Lane, E.C.,
Whence the All over the World Buying Operations of the Firm are directed.

THE NEW PALACE EMPORIUM,



On the Historic Slope of Brickfield Hill, Sydney.

Nos. 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690 GEORGE-STREET.

Nos. 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66 GOULBURN-STREET.

Nos. 403, 405, 407, 409, 411, 413, 415 PITT-STREET.

ANTHONY HORDERN and SONS, ONLY **UNIVERSAL PROVIDERS,**
New Palace Emporium, Brickfield Hill, Sydney, N.S.W.

A MAMMOTH BUSINESS.

The Story of Its Evolution.

REPRINTED FROM "AUSTRALIA," JUNE 6, 1907.

In 1823 a single-storey shop, with but one small entrance to the narrow, low, and poorly-lighted premises. To-day a building covering over 15 acres of floor space in the centre of the

pursuits were being followed on the plains round Bathurst, when the plucky young trader attempted what was regarded in the time of Governors Brisbane and Bourke as the almost im-

In its initial stages the store contained a conglomeration of the rough-and-ready daily needs of a pioneer people. It was a "store" in the generally accepted sense—the principal lines of drapery then being "moleskins" and "crimsons." "Grandfather" Hordern then transferred his operations to Brickfield Hill, the location of these larger premises being actually on part of the site now occupied by the palatial block of buildings which comprise the new Palace Emporium.

When the first steamer crossed the Atlantic from Canada Anthony Hordern was in a fair way of business, catering for the wants of a large section of expanding Sydney. Regular communication was established with the home markets, and the firm began to secure recognition in the colony as "the only Universal Providers." The discovery of gold on the Macquarie in 1851 marked a period in which the business jumped into the front rank of the commercial life of Sydney. Later on younger members of the family became actively interested in its control, and the fusion of new blood was responsible for considerable expansion and enterprise.

It was in 1856 that the first of the Haymarket buildings was erected, a start being made with the old stone building now standing, which for many years served as the grocery department of Anthony Hordern and Sons, before they moved to the new Palace Emporium. There were few shops in the immediate vicinity when a move was made from Brickfield Hill into the more commodious premises.

Working hours in those days commenced at 7 in the morning, and continued until 8 o'clock at night, but when Mr. Samuel Hordern—who to-day controls this immense institution—and his elder brother, Anthony, were admitted to the business, immediate changes in the administration were brought about. In 1859 several new buildings were added to cope with the pressing demand for more accommodation, and the younger generation determined to change the working hours—opening at 8 o'clock and closing at 7. Year by year saw greater progress and greater expansion, and the evolution of the great business has since been synchronous with the progress of the State. As the city extended,

settlement expanded, and the primary sources of wealth were developed, so Anthony Hordern and Sons provided increased facilities to cope with the larger demands upon them as the only Universal Providers.

Even before the train ran beyond Parramatta, Anthony Hordern's catalogue—a very modest little list—carried to the agriculturists in distant parts of the country information as to the goods which the firm held for sale. It was not until 1887 that an illustrated buyers' guide was issued. Three years were occupied in its completion, but not until later years did this annual publication develop into the comprehensive and profusely illustrated general catalogue of to-day. Now, departmental price lists—in themselves important and bulky publications—are compiled at frequent intervals, and special illustrated fashion portfolios are issued at the change of seasons.

This system of carrying to the home of the distant settler—to the pastoralist in the far West, and the miner in the extreme North—faithful representations of the stocks housed in the new Palace Emporium, has been developed. The illustrated catalogues and price lists are all produced by the firm's own employees, and in the firm's own printing works—where the weekly consumption of paper alone runs into four tons. Orders for address labels are given by the million, and price lists by the tens of thousands. The illustrations are made direct from actual photographs taken by Anthony Hordern and Sons' own photographers, and the firm's own artists are responsible for the drawings from life models or seasonable goods.

The country order department, which to-day employs 100 hands, is one of the features not seen by the daily shopper. Here the daily mail of several thousands of letters from every part of the State and distant parts of the Commonwealth and Islands of the Pacific is dealt with by a staff whose special duties are to cater for the wants of mail-order customers. There is a complete system of supervision; every order is checked as it is received from the sales department, and despatched to the packers. Delays are practically an unknown quantity, and instructions received by one mail are executed by the outgoing trains and steamers.



1856.

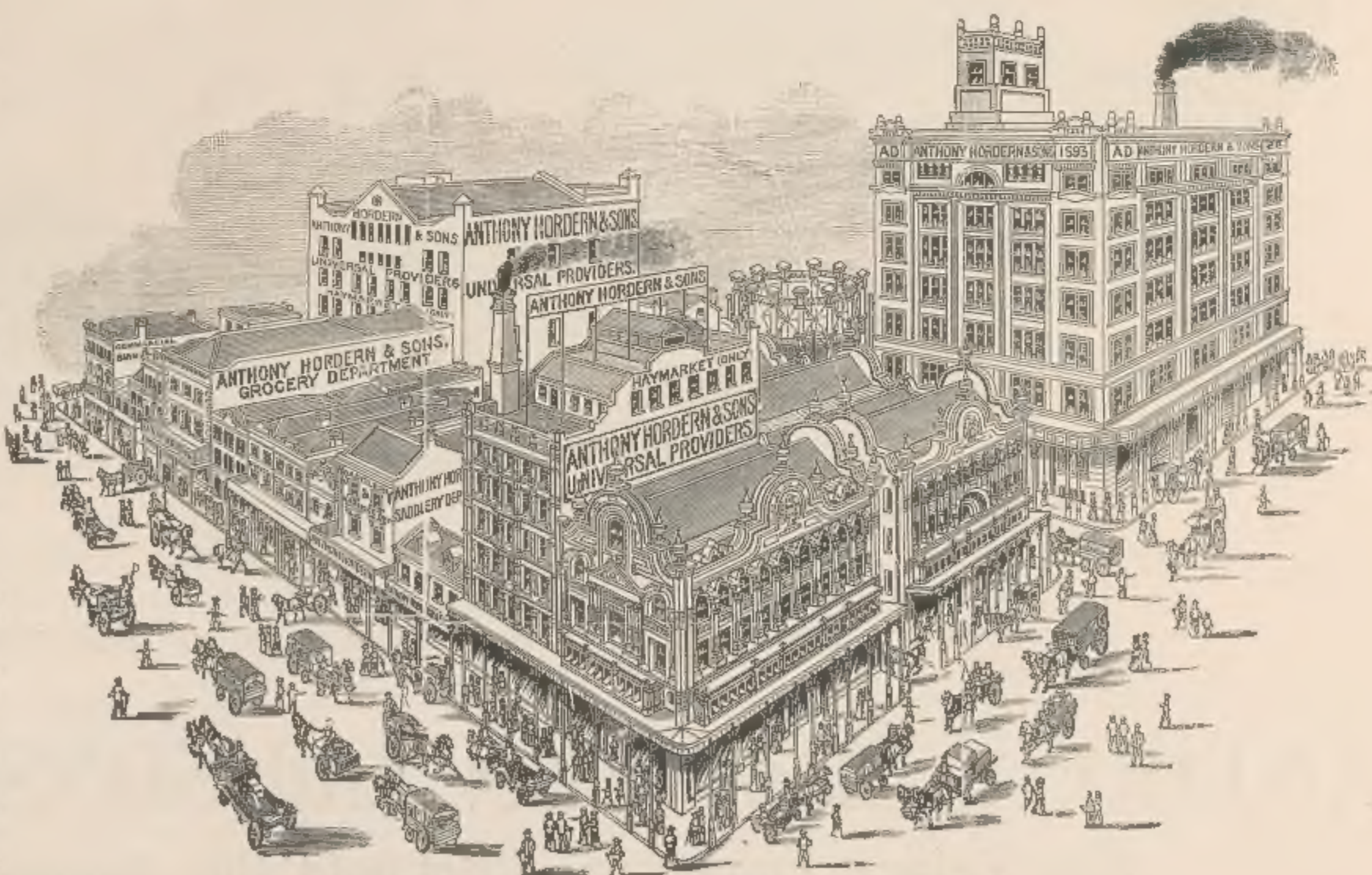
city, giving direct employment to thousands of people, and containing almost every article demanded by the complexity of modern civilisation. This is the transition wrought by Anthony Hordern and Sons in 84 years of trading.

Under the one roof of the new Palace Emporium, on the historic slope of Brickfield Hill, the buyer will find almost everything needed to make home happy and life desirable. The magnificent show rooms are artistically decorated and brimming over with Fashion's fairest faucets. They are roomy, well lighted, and ventilated, in accordance with modern science, and the shopper goes in luxury and comfort through the fifty departments which make up the greatest retail establishment in Australia.

Eighty-four years ago the modest shop responsible for the foundation of this great enterprise involved the outlay of a few hundred pounds. To-day the capital value of the undertaking runs into upwards of a million sterling, while the ramifications of its trade extend throughout the Commonwealth and the Southern Seas.

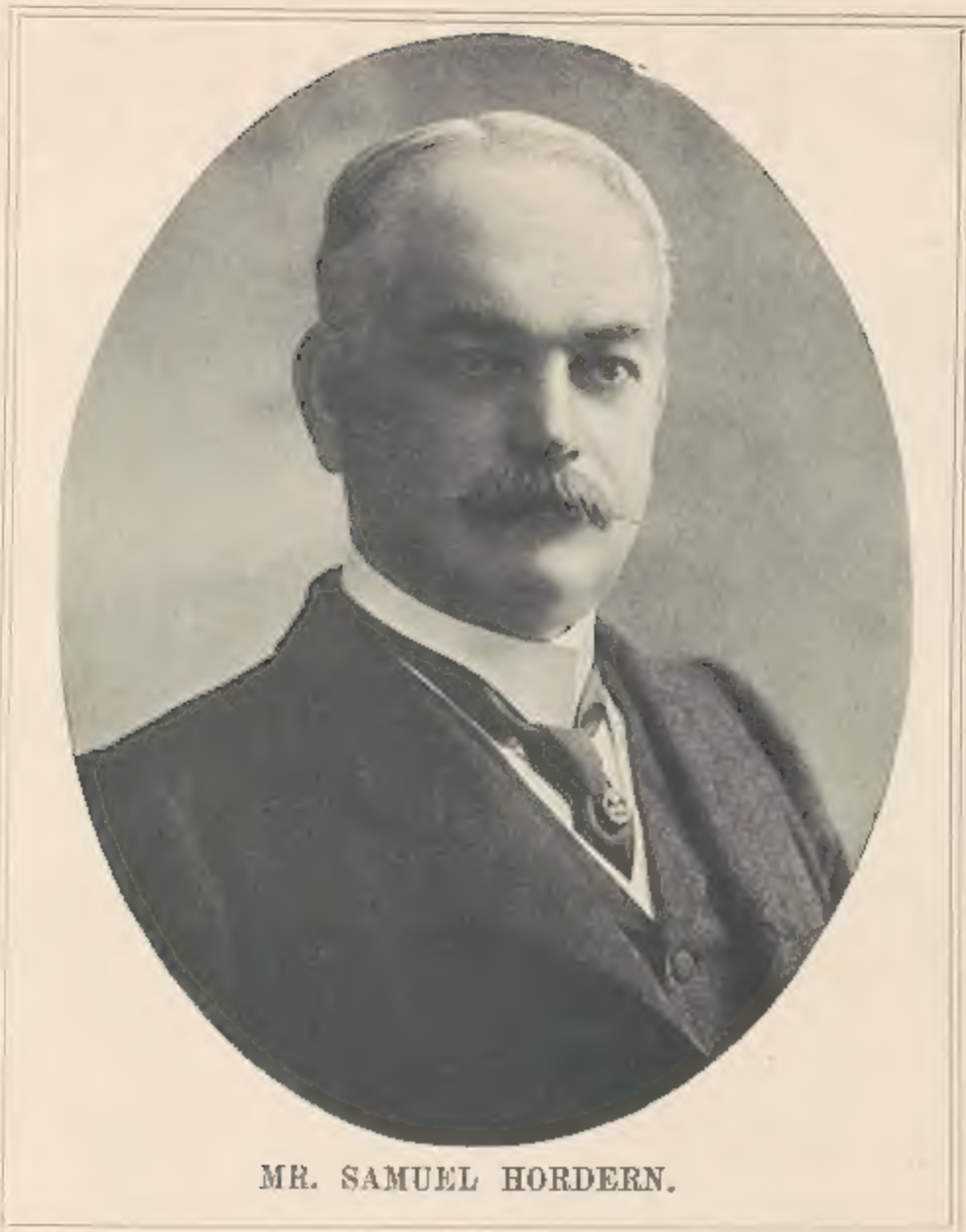
King George IV. had barely served half his short reign when Anthony Hordern, the grandfather of Mr. Samuel Hordern, the present sole proprietor of the New Palace Emporium—made the first effort which formed the nucleus of the huge industrial concern that has evolved from such a small beginning. His day was in the early history of the colony, when the pioneers had not altogether provided themselves against short rations due to the irregular and spasmodic arrival of store ships from the motherland. Some attempts had been made to develop the agricultural possibilities of the country, but settlers had felt the privations of hunger brought about by the loss of a store ship, and had suffered the bitter experience of living on short commons. Communication with Parramatta was a slow process by the river, and bullock teams were not then available at all times for the journey into the country and back. Wentworth, Lawson, and Blaxland had found a way across the Blue Mountains, and pastoral

possible task of obtaining from London periodical shipments of something more than the absolute necessities of life. Progress in this direction was slow, but the disabilities of early settlers nerved the founder of the business to greater enterprise.



1893.

A MAMMOTH BUSINESS.



MR. SAMUEL HORDERN.

In 1886 a change was made in the ownership of this great enterprise. Mr. Samuel Hordern, grandson of the founder of the business, became the sole proprietor and guiding genius of the concern. Despite the opposition of many advisers, he introduced the Saturday half-holiday, and since that period he has rigidly adhered to the week-end early closing. An Australian, firmly imbued with the immense possibilities of his country, Mr. Samuel Hordern at once commenced the development of his ideas in the direction of establishing factories for the production locally of many everyday requirements.

In a very small way he laid the foundation for the immense factory which is to-day devoted to the manufacture of furniture. Originally the furniture factory was used for the repair of articles damaged in transit from England; to-day every article of modern domestic furniture is turned out from designs by Australian artists, and executed by Australian skilled artisans. In like manner the iron foundry and sheet iron works came into existence.

In more recent years Mr. Hordern turned his attention to the production of clothing. To-day the firm's factory devoted to this branch of industry employs more hands than any other similar establishment in the city. Despite the enormous output, however, further extensions to this particular concern are in contemplation to cope with the demands for Anthony Horderns' "tailor-made" clothing. It is Mr. Hordern's intention to extend manufacturing operations to other branches. For this purpose proposals are now under consideration for the erection of a large block of buildings to accommodate the new undertakings.

Another section of the great enterprise is the provision made for expeditiously handling the vast trade collected within the walls of the new Palace Emporium—the delivery department. In the Redfern stables, which vie with the Royal mews in extent and cleanliness, are housed over 200 horses, and the vans, waggons, and carts which are daily occupied in distributing goods from the "Palace" to every part of the metropolis.

The disastrous fire at Anthony Hordern and Sons' Haymarket Palace Emporium, in July, 1901, when nearly all the buildings and goods to the value of half a million sterling were destroyed, led to considerations for the future. There were daily indications that the enterprise was rapidly outgrowing the cradle in which it had been nurtured and fostered. With a clear perception as to the exigencies likely to arise, a promptness of resource and clear-sighted forethought, Mr. Hordern decided to open up new ground and build a palatial warehouse, wherein would be utilised every improvement known to modern science, as an adjunct to commercial enterprises, to supply facilities that would cope with all demands for at least a century to come.

Overcoming what to others would have been insurmountable difficulties, the site on Brick-

field Hill was acquired, and cleared of the three score and ten buildings that had previously occupied the ground. Innumerable difficulties were overcome by the indomitable will of the enterprising originator of the scheme, with the result that within a year of the laying of the foundation-stone, there arose, like the fairy Mosque of Aladdin, that magnificent building, rearing itself as a glorious ornament in our midst—the Palace Emporium, which now graces the historic slope of Brickfield Hill. As the result of thoughtful planning, incessant application, tenacity of purpose, and a great grasp of detail, this structure in itself forms an historic monument of local enterprise, which encourages all our patriotism in anticipating a prosperous future for Australasia.

The great pile of buildings now the home of Anthony Hordern and Sons, known as the Palace Emporium, situated on Brickfield Hill, Sydney, may reasonably lay claim to the distinction of being the greatest structure of bricks and mortar ever recorded in history as being the work of one firm, and completed in the space of one year. The total area covered by the building, courtyards and adjuncts exceeds three acres, having frontages of 280ft to George-street, 453ft to Goulburn-street, and 227ft to Pitt-street, making in all 960ft, while the total frontages to all streets, lanes, and alleyways measure 2600ft.

The building, which consists of five storeys, has its foundations on solid rock. The style of architecture is a free treatment of modern English Renaissance. The boldly designed rusticated lower storeys give the immense structure an appearance of stability and strength, as well as providing a firm base, on which rests the more elaborate upper portion, which is divided into about sixty bays. The sky line is broken at intervals with characteristic pediments and architectural adornments.

The great business block has made an important addition to the commercial architecture of the mother city of the Commonwealth; internally it has collected from all parts of the world the best of the products of many markets. In this process of garnering, Australia has not been left in the cold, for local enterprise finds a place in quite a number of the departments. Anthony Hordern and Sons' own factories are large contributors to the wares which temporarily find a home in the "Palace" ere they are distributed to the four quarters of the Commonwealth.

The handsome show-rooms are devoted to the display of season's models and daily wants. To individualise one section perhaps is unfair to the other; each has its own degree of importance. Thus the Picanninies' paradise finds pride of place with the budding Australian, be he pastoralist or mechanic, clerk or cleric, and the little misses, too, have a warm heart for this heterogeneous collection of novelties. For the mere man the ground floor of the George-street front has its particular attraction, inasmuch as it is the home of men's clothing, mercery, and whatnot. Old patrons of the tailor-made clothing department are familiar with the dressing-rooms, the system of measuring for cross sizes, and the ability of the salesmen, assisted by the workers in Anthony Horderns' own clothing factory—to fit the man, whether he be tall or short, or stout or lean. Mention of any one department without reference to the famous "Green Room"—as dubbed by an intelligent pressman who was struck by the elegant furnishings of the show-room—would be regarded

as a heinous crime by the experts in charge of the ladies' fashions and modes. This extensive show-room is situated on the second floor of the building, and extends along the George-street frontage from Goulburn-street to Swan-street. The furnishing and other appointments of this department are of the highest order of merit and exquisite taste, and they were all specially made at the firm's own factory at Redfern. There are four fitting-rooms arranged for the convenience of ladies requiring any special attention. The articles on show in the Green Room are multifarious and extensive in variety, comprising everything for a lady's wear.

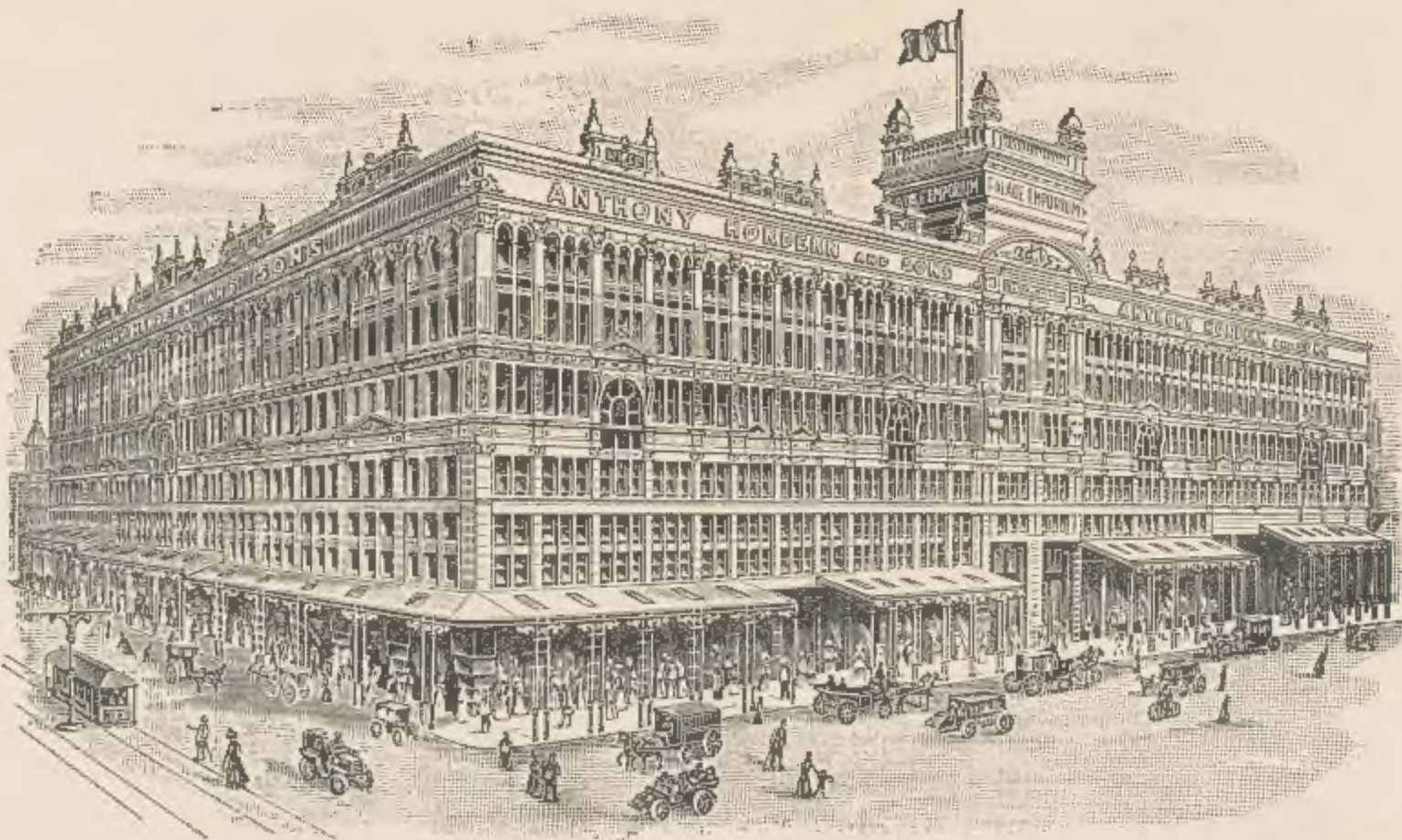
Anthony Horderns' pride themselves on their Manchester department, which is located on the first floor of the Pitt-street entrance, but, of course, as in the case with every department, it may be reached from any entrance, whether via George-street or Goulburn-street. The department is so called as the majority of goods which come within its scope are what are in trade language known as "Manchester" manufactures. But as arranged in the "Palace" it goes far beyond the scope of that definition.

Mention, too, must be made of the furniture show-rooms, despite the fact that the ironmongery, where everything to finish the building with is housed, must be summarily dismissed. Here is what an observant lady visitor wrote of the department which is so largely contributed to by Anthony Horderns' furniture factory, where the designs are created by Australian artists and executed by Australian labor, and where practicable from Australian timbers.

"It wasn't a dream—the furniture department—but a solid, living reality! Even a yellow covered novel would fall to describe its glories. Then the beds! They seemed to have a very pride in their own existence. Their lovely splendor was simply dazzling. As for sideboards—well, surely we might some day, at that price! One's heart must be harder than the 'nether millstone' to resist it. It just completed one's joy—the wonderful showroom. It was like a realised embodiment from fairyland. Here a hint of delicate audacity; there a shimmering seductiveness; yonder a creation highly ornate; and everywhere pervading an all-absorbing, bewildering, fascinating atmosphere of artistic conceptions that suddenly make one feel old-fashioned, dissatisfied, and dowdy, and out of date—and—and—that a new hat is an absolute necessity."

This is the home of Australia's greatest industrial enterprise; where Australia's products are given pride of place; where shopping is a pleasure and profit, and where Anthony Horderns' famous Low Prices reign supreme.

THE NEW PALACE EMPORIUM



The Home of Anthony Horderns' Famous Low Prices.

BUILT BY ANTHONY HORDERN AND SONS, entirely on their own, and, where any way possible, of AUSTRALIAN MATERIAL. A STORE FOR AUSTRALIANS, the PROPERTY of an AUSTRALIAN FIRM; the BUILDING the work of AUSTRALIAN ARTISANS, working ON THE JOB, and of others employed at ANTHONY HORDERN AND SONS' REDFERN FACTORIES.

ANTHONY HORDERNS' emblazon on their business standard the MOTTO, "WHILE I LIVE I'LL GROW," and from this attitude they have never swerved, moving steadily forward in BAD times and in GOOD TIMES, EVER SUPPORTING AUSTRALIAN INDUSTRIES, with the result that everybody knows.

REMARKABLE RECORD OF EXPANSION.

(From "Town & Country Journal," Nov. 14, 1908.)

Quite recently a series of articles was published in the "Town and Country Journal," which, accompanied by illustrations, afforded an idea of the magnitude of that portion of Anthony Hordern and Sons' business that the public never sees, and probably never previously suspected—the great aggregation of industrial enterprises, all owned and directly controlled by the firm, that are permanently engaged in the production of an enormous output of merchandise in indescribable variety. The intricate methods and internal working of upwards of a dozen factories—each worthy in itself of the name of a great industry—were in turn explained. But it is only when one who has had the interesting experience of making a tour of the factories, under the guidance of one of the firm's managers, is afterwards shown over the New Palace Emporium, that the real triumph of commercial generalship and industrial organisation which the sturdy and ever-growing "oak-tree" now represents is fully realised. It is appropriate, therefore, that the completion of the series of articles referred to should be followed by a brief description of the Palace Emporium, the colossal establishment which dominates the city from the historic slope of Brickfield Hill, and which is, without doubt, the most imposing building in Australia—or in the Southern Hemisphere.

First of all, it is interesting to remember that to make way for the new edifice that was to cover over three acres of valuable ground right in the heart of the city, to a height of five storeys, with a frontage of 962ft to three main thoroughfares, eighty shops and other buildings had to be demolished. Five hundred men then commenced the work of excavating the foundations to a depth of from 15ft to 20ft, and early in 1904 the great walls commenced to rise. When the building was completed, it had cost £200,000; and it is the largest commercial structure of one standard of architecture throughout on earth.

In the walls and foundations ten millions of bricks were used—sufficient, if placed end to end, to form a line from Sydney to New Zealand, or from Brisbane to Adelaide—a seven weeks' journey for a man walking thirty miles a day. The lengths of hardwood, for joists, and of kauri pine, for flooring, would have reached 366 miles, or from Sydney to somewhere near Albury. It represented a mile of timber for every day in the year. One thousand iron columns, 50,000 bags of cement, and 8000 sheets of corrugated iron, were used. The 1430 lighting windows, and the 35 show windows, necessitated the use of an acre of glass.

One imperative direction that had been given by Mr. Hordern was that the building should be as thoroughly Australian as possible. Everything that could be so supplied was of local material, and much of it was prepared in the firm's own workshops. Australian enterprise had made the building necessary; Australian money was erecting it; Australian brains were to guide its future destinies. The work of construction was carried out by the day-labor system, under the supervision of the firm's own building and factory managers. The Australian materials were used wherever possible meant that they were used nearly everywhere. Such items as the ornamental ceilings and panelling, fittings, showcases, joinery, and much of the decorative work, all came from the firm's factories and workshops.

Since the opening a year ago, the new shop has been the premier spectacle among the sights of Sydney. The use of the word shop in connection with the New Palace Emporium strikes a note of incongruity. It is more like a huge exhibition building, a world's fair, an aggregation, classification, and display of all the products of everywhere.

Thousands of customers could be within the building and yet it might appear to be almost deserted. But for the perfect system of organisation and arrangement, one could very easily get lost there. The population of an ordinary country town, within half an hour, could be supplied with all its requirements, from hogskin saddles to hymn-books, for the next ten years. Each one of the many departments has a space nearly as large as the Sydney Town Hall, and the latest things in millinery, in meat safes, in muslins, or in mouse traps—as the case may be—are displayed to the best possible effect.

In addition to the twenty-one hydraulic lifts, broad and easily-graded staircases lead from floor to floor, while the promenades between the counters afford plenty of space for a dozen customers to walk abreast, the broad passages having the appearance of streets or avenues in an immense roofed-in town.

The lower three floors of the building, representing a space of nine acres, are open for general business. The two upper floors, of six acres, are for reserve stock, and other purposes. Just as the many separate departments on the shopping floors are arranged upon a plan of perfect order and simplicity, so also are the reserve stock floors, which are divided by passage-ways into squares, and the squares into store rooms, the floor of each of which bears the name of the department or branch to which it forms an adjunct. The task of continuously replenishing the supplies of the departments depleted each day by the purchases of many thousands of customers, is in itself a large contract, the fulfilment of which requires much foresight and unseen yet busy industry.

Enormous stocks are carried on these floors, of which the public has no knowledge. From the cartways that pierce the building at the ground level, powerful and commodious goods lifts ascend and carry stores to the reserve stock floors, or they descend from the reserve stocks to the different departments, all of which have direct access to the lanes. One of the inconveniences from which the business always suffered at the Haymarket was that of having to send some distance to the stores for all reserve stuff.

The millinery and costume work rooms, jewelers' workshop, and a docketing room, are also on these upper floors. In the latter, a strong

detachment of clerks is kept busily engaged in getting sales bills ready. The enormous number of these sales bills required may be readily imagined. Before entering the new shop, the firm had 12,000,000 of them printed—just to go on with.

Every department has now three times the space it formerly occupied. As a result, goods may be tastefully displayed that previously were scarcely seen, if seen at all. The firm always had them, but for lack of space could not effectively exhibit them. Perfumery and patent medicines, electro-plate, cutlery, and jewellery—in the Haymarket premises—were all stored in the basement; now they occupy beautifully roomy showcases in a special, well-lighted, and lofty department, a quarter of an acre in extent.

Strolling through the fashionable showroom, the millinery, costumes, and lace departments, one especially experiences that feeling of luxury with which the whole place inspires the visitor. The eye is charmed by the beautiful harmonies of color in a veritable Garden of Eden of millinery, which in turn is relieved and softened by the delicate pale green Saxony-Brussels carpet. The reflection from the lofty and beautifully-embossed ceilings of stamped and light-tinted steel, and the ample window and ventilating space, invests everything with a delicious air of lightness, sweetness, and repose. In these departments are cosy fitting-rooms, with full length combination swing mirrors, by which the purchaser can survey himself or herself, admiringly or critically, from any or every angle and point of view. Like the mirrors and show cases all the steel ceilings were made at the firm's own factories.

It has already been stated that the general arrangement of the enormous establishment is upon a plan that is simplicity itself. For instance, the interior of the ground floor on the George-street frontage consists of three blocks, devoted respectively to men's clothing, to general mercery, and to rugs and travelling requisites of all kinds. Similarly on the floors above, the Manchester and the dress goods departments adjoin one another; the boots, morning and tea gowns, lace, millinery, and general fashion show rooms are in one series. Elsewhere, the furniture department has the bedstead showroom immediately overhead, with the carpets and linoleums close at hand.

Fancy goods, sports, stationery, books, and toys all run in order in another part of the building; the Picanninies' Paradise (as the toy department is called at Christmas time) being close to the sports department, where the picanninies' parents may equip themselves for any sport, from "bobs" to tiger-hunting; or to the book department, where the quieter ones may choose a volume from a collection rivaling the numbers of the great library at Alexandria.

One of the largest of the departments is the furniture showroom, nearly an acre in extent. This is filled by a magnificent show of the most beautiful and serviceable articles of household adornment or convenience. A feature of the department is a series of rooms, each furnished exquisitely in some distinctive style, the suites being set off by delicate shades of beautifully-patterned paper, in lilac, pale green, warm reds, bellotopes, etc., by which the walls of the specimen-rooms are covered.

The whole of the Pitt-street end of the establishment is devoted to domestic and other hardware; builders' requisites; horticultural implements; oils, colors, and glass; household fittings and ironmongery of all kinds; various requirements for the apiary or the poultry farm; tradesmen's tools for every conceivable purpose; electricians' accessories; saddlery and harness; guns, etc. Each one of these references indicates a department, or sub-department—perhaps half an acre in extent, and giving employment to scores of salesmen. And each department would furnish material for pages of interesting description, did space permit. In the crockery section there is one of the finest displays of glass and chinaware to be found in the world. Upwards of a hundred large and tastefully-arranged stands or showcases contain a wonderfully-varied assortment of articles, many of them exquisitely beautiful in design and material. Fancy glassware, rare vases, fragile and beautiful cups and saucers, costly jardinières, graceful epergnes and flower bowls, with a thousand and one other articles of adornment or utility to suit the needs of all classes, are attractively arranged to the best possible advantage, and to the greatest convenience of those desiring to inspect them.

A feature of the internal arrangement of the Palace Emporium is the facility afforded for inspection and for demonstration. A person wishes to buy a saddle or a set of harness; there are life-size models of horses upon which he may try them on—if he liked he might even get on, and see if the saddle was comfortable. A builder or householder wishes to obtain a particular fitting—be it window-fastener or patent gate-lock, or whatever he may ask for—if there is likely to be the slightest unacquaintance with the article, one may be seen in actual use, fitted upon a model gate or window. Whether the customer be in search of sanitary equipment, or a cooling-range; of a pony-drawn or hand-driven lawn mower; of a portable forge or a garden arch; of a lattice-work summer-house or a mangle; of a camping-outfit or an incubator (the list might be almost indefinitely continued), he can either see the article he requires in actual use, or its use can be readily demonstrated to him in a very few minutes. And in a very large majority of cases the article he will buy has been made by the firm in their own factories.

In addition to luxurious accommodation for customers in the form of lavatories and retiring rooms, there is a large soda-fountain and confectionery counter at one end of the dress department, and a refreshment-room capable of seating at once from 200 to 350 persons, all at small and widely-separated tables. Two indications of the firm's methods are here afforded—first in the fact that the marble slabs and counters and the beautiful soda-fountain were made at their own marble works; and secondly, that the drinks they sell are also made by themselves; while the confectionery is purchased from the best houses abroad, and inspected, before being sent out, by Anthony Hordern and Sons' own representatives at home.

A wonderful system of pneumatic cash tubes, the largest the Lamson Store Service Company has ever put up anywhere, has been installed in the building. The main cash receiving hall or "exchange," has hundreds of large, polished, bright metal tubes, forming an organ-like dome overhead, and from these tubes the cash cartridges drop with a continuous rattle, like shells into a beleaguered fortress; while 16 cashiers—each working at his own till—are kept constantly busy receiving cash, and counting out change. There is another and similar cash receiving hall, or "exchange," in the Pitt-street end of the establishment, which is connected by tubes to the main hall in the George-street block. In the pneumatic cash system, 15 miles of thick brass tube have been used to effect communication between the cash halls and the 200 cash stations scattered all over the building. One of the tubes extending along the Goulburn-street frontage is 500ft long, and is said to be the longest of its kind ever erected anywhere. The tubes are also utilised to transmit messages and documents of all descriptions from place to place, all over the premises, and to communicate between the general offices and those of the heads of departments. The pneumatic power for the George-street block is supplied by 65 horse-power electric motors in duplicate to guard against accidents. Stoppages are further guarded against by a 75 horse-power Crossley gas engine which stands ready for instant use in case the electric supply from the City Council should fail. These motors and their attendant gas engine are arranged to drive powerful "Roots" blowers, also in duplicate. These blowers are colossal cylinders enclosing fans that accomplish 78 revolutions per minute, and propel 110 cubic feet of air at each revolution. These enormous cylinders are each about the size of a four-horse bus. This installation of machinery is for the George and Goulburn streets blocks. There is a similar duplicated plant, but of rather less power, to work the Pitt-street block.

The twenty-one lifts are supplied by hydraulic power, and the entire building is illuminated by gas and electricity. The electric switchboard, one of the handsomest in Sydney, was manufactured, of colonial marble, at the firm's own works. Throughout the establishment there is the most complete provision for the prevention and extinction of fires. There are sixty-six fire-appliance stations, with the most modern fittings, and convenient fire escapes of the most modern pattern are within easy reach of every point in the building. Grinnell sprinklers, with altogether ten miles of service pipes, are fitted on every floor, as well as automatic fire alarms. The main stairways are of steel, and the lift wells can be cut off so as to prevent them from acting as air-draughts. The fact that customers do not go to the two top floors is an additional safety measure. Furthermore, the strictest precautions are taken with regard to inflammable materials—in the oil and color department, for instance, all the inflammable oils are kept in a fireproof chamber outside the main building.

For the mere floor covering of the departments over 2000 yards of blue, heavy, Saxony-Brussels carpet were used, made especially to order by James Templeton and Company, of Glasgow, with the firm's house-motto—"While

I live I'll grow"—and the new famous oak trees, woven into it. In addition, there are 25,000 yards of linoleum and 5000 yards of riostoid floor covering. Much of the linoleum is of a special new pattern, resembling an inlaid wooden floor.

The firm's telephone switchboard has 81 lines, and there is, besides, a large inter-departmental service. In this enormous building, which has frontages of 455ft to Goulburn-street, 328ft to George-street, and 250ft to Pitt-street, (and to gaze up at which makes a 6ft man feel about two inches high) there are over 1500 hands employed.

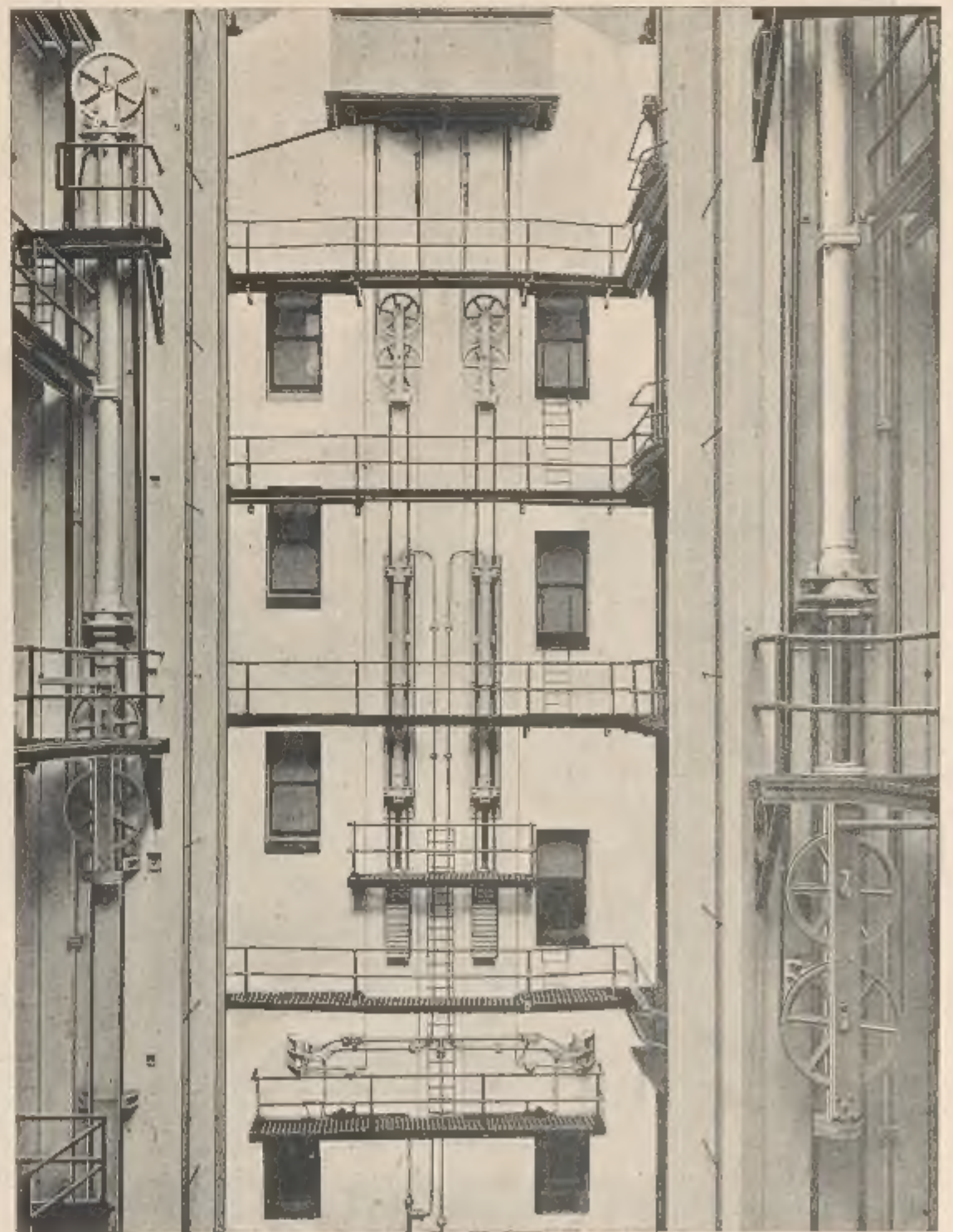
The magnitude of the firm's operations led some time ago to the establishment of a printing department, for the preparation of catalogues, etc. In addition to the general catalogue of over 1000 pages, departmental catalogues, ranging from 64 to 200 pages, are continually being issued for circulation all over the Commonwealth. Twenty bands are employed constantly, and the machine and composing rooms are, perhaps, the most comfortable and well-lighted in the States. The letterpress machines include three of the latest style double-royal Wharfedales, engaged continuously on catalogue work. All the work turned out is of first-class character, and the binding is done on the premises. Other machinery in use includes folding, cutting, and wire-stitching appliances. The output averages over three tons of paper per week—the work in hand usually runs to more than a year in advance.

When the New Palace Emporium was opened, to mark what was not only the most important event in the history of the firm, but one of the most important in the history of commercial enterprise in Australia, the managers and heads of departments presented Mr. Samuel Hordern with their photographs—86 in number—arranged in a frame around his own. Eloquent testimony of the relationship of employer and employee is the fact that only nine of the 86 had been less than ten years with the firm. The services of the remaining 77 averaged 18 years. Twenty-nine of them had been in Mr. Hordern's employ for over 20 years, and four for more than 30 years.

In the New Palace Emporium are installed twenty-one powerful hydraulic lifts constituting by far the largest and most complete lift installation in the Southern Hemisphere and entirely of Australian production.

Designed by the firm's consulting engineer, Mr. Norman Selfe, Memb. Inst. C.E., the machinery was constructed by the Hydraulic Engineering Co. of Sydney, and the whole of the passenger cars were made at Anthony Hordern and Sons' Cabinet Works, Redfern. The chaste designs of the cars and enclosures are especially noticeable, and a most interesting variety of ornamental woods are used for the sets of panels. A special feature of these lifts is the patented arrangement under which all the doors for both passengers and goods close automatically as the car leaves each floor, thus doing away with the possibility of what has been in many cases a cause of serious disaster.

The illustration shows the machinery of two passenger lifts situate at the Goulburn-street end of one of the courtyards, and of the goods lifts at the slides, together with a portion of the fire escape galleries with which the whole of the buildings are fitted.



Machinery of Four Hydraulic Lifts.

THERE ARE TWENTY-ONE LIFTS IN THE BUILDING.

Messrs. Anthony Hordern and Sons, Palace Emporium, Sydney.



Main Drapery Floor.



The Stationery Section.

Messrs. Anthony Hordern and Sons, Palace Emporium, Sydney.



The Cutlery and Electroplate Department.



Corner of the Green Room.

Messrs. Anthony Hordern and Sons, Palace Emporium, Sydney.



Toys, Games, and Bric-a-Brac.



A Glimpse of "The Crockery."

An Australian Industry—Anthony Hordern and Sons' Despatch Branches.

How They Are Organised and Controlled.

(FROM "TOWN AND COUNTRY JOURNAL"
OF MAY 2, 1900.)

That there are more things in connection with the mammoth business of Messrs. Anthony Hordern and Sons than are dreamt of in the philosophy of the general public—which marvels mightily at the proportions and volume of the new Palace Emporium and its daily trade—has been abundantly demonstrated by the recent articles and illustrations in the "Town and Country Journal," descriptive of a tour of the firm's numerous and extensive outside factories which themselves employ a small army of artisans and operatives in the primary details of universal providing. No attempt to convey an impression of what the public does not see in connection with this huge enterprise would be complete, however, which did not make some reference to the great organisation which exists for the purpose of maintaining the system of distribution by which the immense order-trade, amounting to millions of parcels per annum, is carried on.

It might be considered that even the task of counting the apparently countless throng of customers who are continuously being served along the miles of counters was too hopeless for anyone to undertake. But just as somewhere, in connection with a great installation of modern machinery, is a set of simple levers, that despotically control the movements of every swinging crank and ponderous wheel and revolving shaft, so also is the mechanism of this great twentieth-century house of distribution so perfectly organised that every detail is under absolute control from the central administration. And of the millions of packages annually handled, the system adopted renders it next to impossible that any should go astray. Should this occur, the method of record-keeping is such as to render the rectification of an error, in connection with any sale, a matter of comparative ease.

A considerable portion of the basement of the Palace Emporium Building is devoted to the purposes of the delivery branch of the business. The Country Despatch Room is entirely separated from the City and Suburban Despatch Rooms, but in the combined branches about 110 employees are continuously and actively engaged in addressing and sending out parcels. This number does not include the carters and their assistants, who represent between 150 and 200 more of the firm's staff, nor the men engaged in the work of looking after the stables. So that (irrespective of the salesmen) about 300 men are employed in the actual work of delivering orders.

In connection with every parcel that is to be delivered, a parcel slip is made out from the salesman's docket, and this slip, signed by the

salesman and the shopwalker, accompanies the parcel to the despatch room. It sets forth the name and address of the purchaser, and other necessary particulars. The town and suburban delivery department contains, at the rear of the tables upon which the parcels and slips are received, a series of desks at which the packages are addressed. This done, they are passed on to inclined planes, down which they slide into bins, whence they are collected in trucks, and wheeled to loading docks. There are sixteen of these, each representing a separate district, town, or suburb. Waverley and Woolahra are one district, Paddington is another; Bondi and "lower" Bondi comprise a third district, and so on. The work of loading the carts, after this system of classification, is a comparatively simple one, as, in fact, is also the system of classification itself.

In planning the building the department was allocated to the mathematical centre of the basement, so that it is easy of access from all of the sales departments. To facilitate its working, there are covered roadways intersecting the basement of the emporium at the ground level, enabling the carts to reach any of the delivery-branches, from all sides. Goods lifts and chutes ascend from them to every floor above, and at each of the upper floors cross bridges bring everything to these lifts, with a minimum of handling. Every opening and window in the building, in connection with these lifts, as is the case, too, with those for other purposes, is protected by iron screens. Perfect means of communicating with every department are provided, for not only is there a system of pneumatic tubes for the transmission of papers or written messages, but there is telephonic communication with 81 different points in the establishment. The roominess, which is a feature of other portions of the Palace Emporium, exists also here; so that, even at the busiest times, there is no congestion and no confusion; thus the liability to error is much less than it might be under less favorable conditions. And as the despatch branches are extensive, so also are they well lighted, well ventilated, and lofty, with cool and light metal ceilings.

In the town and suburban delivery-rooms alone 40 hands are employed. There is a constant flow of parcels, the last being always so on Monday mornings, when between seventy and eighty carts are all loaded up and sent off upon their rounds, the last being always away before 10 o'clock. Some of these, journeying out to the more remote suburbs—such as Auburn, Manly, Turramurra, or Ryde—occupy the whole day in doing their round; others, engaged upon town routes or in visiting the nearer suburbs, come back for a second loading; some have very short runs, and may be back for a further load within the hour. Of the rooms described there are four, in connection with the metropolitan deliveries—one is for general merchandise; one for groceries; one for ironmongery; and one is devoted to furniture. Situated in the "general" branch is the parcels inquiry office, for the convenience of persons who wish to make any inquiries respecting parcels. The inquiry office is reached by an easy staircase from the de-

partments above, and also has tube and telephonic communication with every part of the Palace Emporium.

In this despatch room also the parcels arrive by chutes or lifts from all departments, and are passed on to sorting tables. Each parcel has the address-slip attached to it. Another slip is then attached, bearing the word "Railway" in red letters if it be intended for despatch by rail, and the name and address of the consignee; then the parcel, after weighing, goes to its allotted bin.

The country order despatch room employs between 60 and 70 men, and resembles, in its arrangement, the parcels office of some great American railway station. From it are forwarded not only parcels by rail, to all parts of the Commonwealth, but by steamer also, to distant portions of Australia, and to places beyond the seas as well. There is a perfect system of classification here also. The room, which is about 100ft long and 90ft wide, is divided into branches, by tables and partitions. One section is for "interstate and island orders only;" another is for parcels that are to be despatched by the Northern mail train; another relates to the Southern mail; others have the handling of parcels for the North Coast, the South Coast, and so on. Each has, displayed upon boards in a convenient position, all the latest shipping intelligence or other information likely to be required.

A branch of this department is the pattern section, whence in compliance with the requests of country customers, more than 500,000 patterns are sent out annually.

Another, but adjacent, portion of the establishment is devoted to the work of packing and despatching all goods that are to be sent by train from Darling Harbor Railway Station. These are mostly heavier lots of goods, such as rolls of wire-netting, large cases, and so on. An illustration of the careful attention to detail exercised by the firm is shown in the fact that the straw used in packing is all kept in specially-built fire-proof bins, only so much as may be actually required being taken out at each operation. Ten hands are employed in this branch.

In order to obtain some idea of the work of distribution, as carried out by the firm through its despatch branches, one has not only to consider the number of parcels handled, but also their infinite variety. Messrs. Anthony Hordern and Sons post over 1000 parcels per week—or 52,000 per year. Their consignments by rail and steamer number nearly 100,000 per annum. Apart from the parcels sent to the railway and to the wharves, the firm sends out annually, in its own vans, about 2,000,000 packages to the city and suburbs, and the contents of these parcels consist of, what?—Silks, satins, and velveteens; dress goods and trimmings; ribbons, laces, embroideries, and drapery and haberdashery of all kinds; mercery, blankets, and mosquito-nets; fancy goods, fans, and perfumery; handkerchiefs, hats, and hosiery; agricultural implements and underclothing; pianos and provisions; watches and wall papers; tobacco, toys,

and tools of trade; clocks, furniture, and patent medicines; kid gloves and cutlery; floor coverings and electroplate; corsets and builders' materials; umbrellas and sheet glass; saddlery and fishing tackle; earthenware and window blinds; guns and gas fittings—and most of the other things either mentioned in or omitted from the dictionary of daily requirements.

And these things go, in addition to the different quarters of Australia, to New Zealand, Norfolk Island, Samoa, Tonga, Hongkong, Colombo, Manila, the Bismarck Archipelago, German New Guinea, the Marshall Islands, the Solomon Islands, the Gilbert and Ellice Groups, the New Hebrides and Fiji, the Banks Group, the Cook Islands, British New Guinea, and even to Corea, South Africa, and to England. Among its orders from other countries, the firm received one from Poplar, near London (England) for a pair of molrain trousers! Mention of all these facts prepares one for the information that Messrs. Anthony Hordern and Sons order their address labels (which, by-the-way, they print themselves) by the million, and their salesmen's dockets twelve millions at a time.

A number of the outlying branches of the business have already been described. But nothing has yet been said of the firm's splendid stables and vehicle sheds, at Goodlet-street, Strawberry Hills, wherein are housed the seventy-five or eighty carts, and the 175 horses, to which the delivery business gives regular employment. These adjoin the firm's marble, slate, and masonry works, which have already been the subject of an article in the "Town and Country Journal," and with them occupy the greater portion of five acres of ground, known as Buckland's Estate, which was purchased some years ago by Mr. Hordern, and which is bounded by Elizabeth, Wilton, Goodlet, and Belvoir streets. The stables, which are of brick, were built about seven years ago by the firm's own staff, and are brick-paved throughout, comfortable, and well drained, and cleanly kept. The premises are divided into three long stables, each with a double row of stalls, overhead feed lofts, and with loose-boxes at the end; and a wide cart-yard more than sufficiently large to accommodate the whole of the carts used in the business. A manager, foreman, and six men have the care of the stables, and three blacksmiths and two saddlers are constantly employed. The firm does all its own harness-making, its own shoeing, and all its own clipping. Also, nearly all its horses are broken in by its own staff. Some of them are bred by Mr. Hordern, at Retford Park, Bowral, but, in addition, the head of the stables is constantly purchasing the best horses obtainable at the leading city saleyards. Splendid horses they are, all of them; all are in the best of condition, and exhibit every sign of careful attention and treatment. In fact, some of the best carriage-pairs in town have come from this stable, bringing as much as 200 or 300 guineas per pair. His Excellency the Governor-General, and several State Governors, among others, have purchased their carriage-horses from among this fine collection.



THE Refreshment Room AT THE Palace Emporium,

where, during intervals of shopping,
Customers find an appetising
variety of

Light Refreshments,

Non-intoxicating Drinks

(suitable to the season), and, as
is acknowledged by everyone,

The Best Cup of Tea in Sydney

As many as Five Thousand Cups of Tea
have been served in this Room
IN ONE DAY.

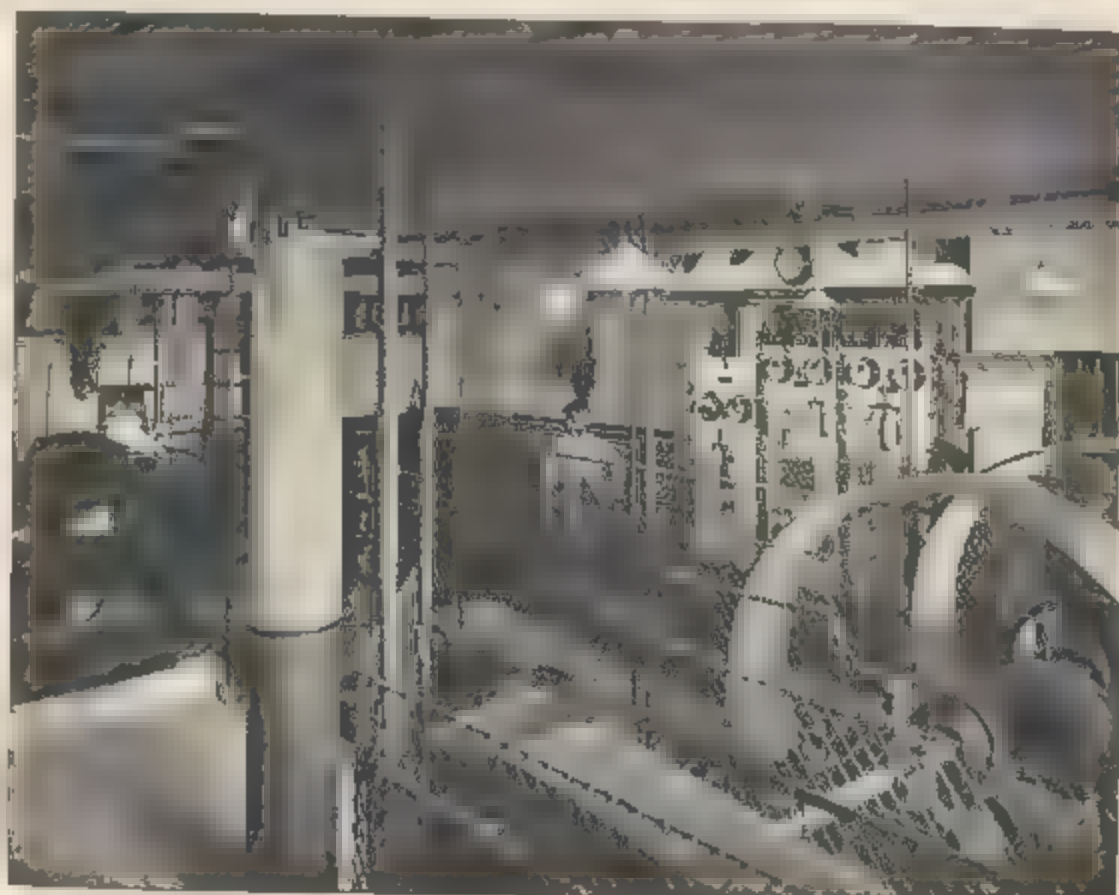
Messrs. Anthony Hordern and Sons, Palace Emporium, Sydney.



The TWO PHOTOS. above show Portion of the PRINTING PLANT of THE FIRM, forming part of the Buildings on BRICKFIELD HILL. All the PRINTING required for the ADMINISTRATIVE DEPARTMENTS is done on the Premises, and it is here that the FAMOUS CATALOGUES, FASHION BOOKS, and PRICE LISTS, associated with the dealings of ANTHONY HORDERN AND SONS, are printed.



The JEWELLERY WORK-ROOM at the PALACE EMPORIUM, where JEWELLERY IS MANUFACTURED, and REPAIRS DONE, The POSSIBILITIES of this branch of MANUFACTURING INDUSTRY are practically unlimited. Everything from WEDDING RINGS to the most ELABORATELY DESIGNED Articles in SILVER AND GOLD, and PRECIOUS STONES, can be MADE IN AUSTRALIA.



The two Photos represent the Starting and Finishing Points of the PNEUMATIC DISPATCH TUBE SYSTEM, at the Palace Emporium, by means of which CASH RECEIVED from Customers is Carried and CHANGE RETURNED. FIFTEEN MILES of Brass Tubing, connected to Engines of 100 H-P., are employed in this Service, and there are TWO HUNDRED STATIONS in the various Departments for the DISPATCH OF CASH and RECEIPT OF CHANGE.

An Australian Industry—The Delivery Department of



A Busy Corner in the Despatch Room.



A Section of the Country Despatch Room.

Messrs. Anthony Hordern and Sons' Palace Emporium.



The Goulburn-street Frontage of the Palace Emporium at 8 a.m.



One of the Three Stables.



ANTHONY HORDERN & SONS

FOSTER AUSTRALIAN INDUSTRIES.

The HISTORY OF A COUNTRY is largely the HISTORY OF ITS COMMERCE, for without PRODUCTIVE POWERS and WITHOUT TRADE, no Country's History is Worth Recording.

PARLIAMENTARIANS may talk, and ELECTORS may MAKE and may MAR GOVERNMENTS, but, if while all this is going on, TRADE does not expand and INDUSTRIES FAIL TO MULTIPLY, a country thus circumstanced will soon have NOTHING TO GOVERN, MUST SINK INTO OBLIVION, and WILL DIE.

"UNWEPT, UNHONOURED, AND UNSUNG."

Therefore AUSTRALIANS who render help in the GREAT WORK of fostering TRADE and establishing INDUSTRIES are entitled to the Sympathy and PRACTICAL ASSISTANCE of their FELLOW COUNTRYMEN.

Australians thus engaged are MAKING HISTORY, and BUILDING FOUNDATIONS upon which the AUSTRALIA of the FUTURE may safely stand. They are finding the MEANS of DEFENCE, and, should occasion arise, of OFFENCE as well, for if there is ever

AN AUSTRALIAN ARMY AND AN AUSTRALIAN NAVY

in being, it will be because AUSTRALIANS have STUCK TO TRADE, and employed their TIME and MEANS in

THE ESTABLISHMENT OF AUSTRALIAN INDUSTRIES.

ANTHONY HORDERN AND SONS,

AUSTRALIAN MERCHANTS, AUSTRALIAN MANUFACTURERS, UNIVERSAL PROVIDERS, and the Proprietors of the LARGEST RETAIL BUSINESS in AUSTRALIA, lay claim to be CLASSED AMONG AUSTRALIANS as above described.

Their EFFORTS in the direction of ESTABLISHING INDUSTRIES date back for MANY YEARS, and in BAD TIMES and GOOD TIMES they have STEADILY MOVED FORWARD, with the RESULT that EVERYBODY KNOWS.

THE PRESENT CONDITION of the INDUSTRIES directed by the firm is DESCRIBED AND ILLUSTRATED in the following series of articles published in the "Town and Country Journal" some little time ago.

IN ADDITION TO GOODS MANUFACTURED IN AUSTRALIA the Sales made over the counters of THE BIGGEST STORE IN AUSTRALIA, not forgetting Goods sent into the Country in response to Orders by Post, include ENORMOUS QUANTITIES OF IMPORTED MERCHANDISE.

A Tour of Anthony Horder and Sons' Factories.

FURNISHING THE HOMES OF THE PEOPLE.

FROM 'TOWN AND COUNTRY JOURNAL'
OF MARCH 7, 1906

NO. 1

The visitor to Sydney who has inspected the Palace Emporium, on "the historic slope of Brickfield Hill," often returns to his place of abode—justly proud of having witnessed the internal arrangements of one of the most remarkable commercial institutions in the world—and tells his friends that he has "seen Anthony Horder's." In supposing that the firm's business is all transacted in the great building which has not without some reason been called "the biggest store on earth," he falls into an error which is not unnatural, and in which many persons share. Enormous as is the new building, with its nearly a score of acres of rich piles of merchandise, its broad promenade for purchasers, its commodious elevators and wide staircases, giving access from floor to floor, and its daily throng of scores of thousands of customers, it is only a part of the business of Anthony Horder and Sons. It is, in fact, but a showroom and distributing centre for the products of the firm's numerous large factories—outlying branches of which the public patrons know little or nothing.

Little reflection is needed to convince any person who has observed the volume of business transacted at the Palace Emporium that the work of providing for the daily demand is no light task. And the conviction is more than strengthened by an inspection of the factories, such as a representative of the "Town and Country Journal" through the courtesy of the firm's managers was enabled to make recently. It would be useless to en-

quire the whole of these great factories when the details of the work are so interesting. The wealth of material for description is almost infinite and varied. But sufficient may be said to convey an idea of the arrangement and methods of one of the groups of factories at Redfern which comprises the furniture factory and bedding and upholstering works, leaving a number of other establishments to be described later. This group of buildings, which consists of three distinct factories, in itself represents a vast business giving employment to between 300 and 400 hands. Standing as a landmark on one of the highest points of the district, and surmounted by an enormous chimney, which alone cost £1000 to build, it is emblematic of the large amount of capital which is sunk in the business. But while everything is up-to-date and the place well-lighted and ventilated and fitted with due regard to all modern conveniences of working there has been no wasteful expenditure, the buildings being at the same time substantial and severely plain. The absence of any clerical staff too, is a characteristic of the factory. All those employed being practical workers.

The building wherein the furniture is made is a square brick structure of four storeys each floor being 200ft by 100ft. Here the incessant whirr of machinery indicates the activity within. Wood-working machinery of the most effective and in many instances of the most ingenious description is in

use the aggregate saving in time and labor being enormous. Power for driving this machinery, and for supplying the electric lighting that is available throughout the establishment, is obtained from a magnificent engine (colonially built, from designs by the firm's consulting engineer) of 250 h.p., the steam being generated in large boilers, of which two are always in use and two in reserve. The engine has a fly wheel 14ft in diameter and weighing 8 tons, which was made in Sydney 15 years ago, and formed a trophy in the following Eight-hour Day procession. Maintained in spick and span order, the huge machine almost noiselessly drives the whole of the factory appliances. An accumulator is also used for storing power to feed some of the different branches. The whole of the waste wood and shavings are used as fuel, being conveyed to the furnaces from various parts of the factory by means of chutes.

As an adjunct to the furniture factory, there are two extensive timber yards, covering several acres, wherein stocks of timber averaging a million feet are always kept seasoning. In racks, the time required for this process being nearly a year. A great deal of colonial timber is used—in fact, preference, where possible, is given to it—such as New South Wales rosewood, beech, and maple, cedar, colonial pine, kauri pine, Tasmanian blackwood, and New Zealand veneers, such as puriri, totara and mottled kauri. The principal imported timbers are oak, ash, walnut, redwood, and Oregon, all of which the firm is a large user.

On delivery into the building the timber is received directly into double planing machines, that plane both sides at once. It is carried thence to crosscut saws, and cut into the required lengths, prior to passing to the various shaping machines of which there are over 30. Space does not permit of a description being given of all these, but they include machines for shoving boards to any required thickness—or thinness—with the same celerity and absence of fuss that a slice might be cut from a piece of cheese, tenoning machines, which cut a tenon of any desired angle and width, and up to 4in long, mortising machines, in which the stabbing action of a keen chisel enables the operative to cut a mortise neatly, and far more rapidly than would be possible by hand. There are even machines for sandpapering timber (after it has been dressed to shape) by its contact with a sandpaper-covered cylinder which revolves at such a very high speed that a few seconds pressure is all that is required to secure the necessary smoothness of surface. A tedious process of handwork used to be the formation of dovetail joints, there are machines in the factory for making these about seven times as quickly than was ever possible by hand, and so very truly that the joint must be absolutely firm and strong. A feature of much the woodworking in fact is the exactitude with which the points thus cut can be made to fit without the exercise of the same tedious care that formerly was necessary. Other apparatus in this portion of the factory includes circular and crosscut saws of all descriptions and saws—some of the operatives being exceedingly expert at guiding the cutting of a number of super imposed thicknesses of board, their only indicator being a pencil line—joint-

ing machines of different kinds, an improved swedge saw (narrowing from the centre to the edge from 5 to 32 gauge, so as to save saw dust in cutting Venetian laths, for which work it is chiefly used) and shaping machines capable of cutting wood, in a few seconds, to almost any mould or outline. Each detail of the work is specialized to ensure economy in time and in handling, and owing to the variety of the machines, any piece of almost any article of furniture, with the exception of carved or turned work, may be made in the branch just described.

For the carriage of goods up or down there are two hydraulic ram lifts, one at either end of the factory. On the higher floors are seen to turn the Venetian blind making department, the chair shop, the turning branch, the seat on for the manufacture of refrigerators, the drying lofts (for further seasoning timber when required), the polishing shops, and the cabinet making department. In the chair shops are hundreds of frames (such as the firm formerly imported) of chairs and couches, in various designs and different timbers, frames ranging from the frail but fashionable to the solid and everlasting. The pieces of the frames are put together here, such work as polishing, staining, and upholstering to follow later in other departments. The firm receives many orders for ecclesiastical work such as church chairs, pulpits, etc. In some churches a massive kind of chair, with provision for hymnbook holder, hat rest, and umbrella support is disappearing, the old type of pew. Chairs of this kind have a solid but not unattractive appearance.

Sight lathes are in the turning department. A feature of this branch is that the waste of timber has practically been reduced to zero. Even the smallest cuttings are turned into wooden curtain rings, or something else small, but useful. Much that is interesting could be written of the picture-framing department, where many thousands of frames are turned out per week, including hundreds of special orders. The stock of glass alone kept here is enormous, and the work is economized by the use of many labor-saving wood working appliances.

The output of Venetian blinds is now quite a large item, and in this connection, too, the introduction of machinery has rendered it possible to fulfil orders in three days which formerly required a fortnight. A point which is never lost sight of, the foreman explained, is the necessity for expedition in fulfilling orders. He further said that in this, as well as in all other branches of the factory, a golden rule was observed in the matter of buying timber—that was, to accept nothing that was not absolutely perfect, and to adopt the most rigid system of inspection. A machine for planing Venetian laths attracts attention. It consists of a fixed knife, and the lath is drawn over it by a fractional roller, the result being that shavings as thin as paper and the full length of the lath, are taken off at each cut. In connection with the drying lofts, only the natural system of drying by atmospheric influence is in vogue. A subject to which years of study have been given in the designing of refrigerators. One main principle kept in view is to reduce the consumption of ice, and for the refrigerators now produced it is claimed that ice frequently lasts in them for 48 hours.

On the upper floor of the factory, well lighted by means of glass panels in the serrated roof, is the main cabinet shop, a spacious room wherein the finished parts of the furniture are put together. Some beautiful work is done here, furniture of all kinds being turned out, ready to be finished by the polisher and the upholsterer. The firm's articles are as to be in use in the furnishing of Government House and of the poorest cottage, and the range covers all the stages in between, from the kitchen table to the most costly Louis XI drawing room suite, besides providing for every variation of taste. Other kinds of woodwork besides furniture are produced, too. For one thing many thousands of cigar boxes are made. So are thousands of yards of collapsible lattices work. All the fittings show-cases, and joinery of various descriptions for the firm's new emporia were made at this factory, including over a mile of counters—an order which of itself would have overwhelmed many an important establishment.

There is one branch of the business which has not yet been successfully performed by machinery, that is, polishing. This is done by hand, and occupies a large department and a large staff. Furniture that has to be stained is treated, as in other respects, on the wholesale principle. Even the largest articles do not have the stain applied by a brush, but are totally immersed in large staining baths.

Appliances for fire-prevention are installed throughout the factory. There are also prohibitions not against smoking or striking any lights, or even bringing wax matches into the place. The glue-pots are heated by steam, and electric lighting plant reduces the fire risk to a minimum, but the place is so well lighted naturally, in addition to being well ventilated, that even the electric light is not required to any great extent.

The bedding and upholstering factory is an extensive building adjoining the furniture factory, but though the output is very large the work performed is less varied in character. The mattress frames are made in the wood mills, and put together in the bedding works. For stuffing the bedding the firm imports the finest Samarang kapok from Java, and for cheaper class of work the less expensive Ceylon fibre. Horsehair, too, is purchased in long ropes. After being untwisted on an old fashioned "spinning-jenny," it literally "goes to the devil" the devil in this case being a teasing machine which has gained that polite pseudonym. The kapok also has to go through various teasers. The firm uses kapok, fibre, etc., in enormous quantities, consignments of thousands of bales coming to hand at one time. Power-driven sewing machines are used in the work of stitching the bedding, the relief thus afforded to the workers being very great.

For each of the objects the firm has had in view in establishing these industries of its own was only its own requirements and by working with machinery and avoiding the intervention of a middleman to compete with the cheap Chinese and other labor. All the labor employed at the factories is white—in fact, until recently the employees had a picture of a Chinaman displayed in the works, with an inscription setting forth that it (the picture) was the only yellow man in the place.

An Australian Industry—Messrs. Anthony Hordern



Exterior of the Building

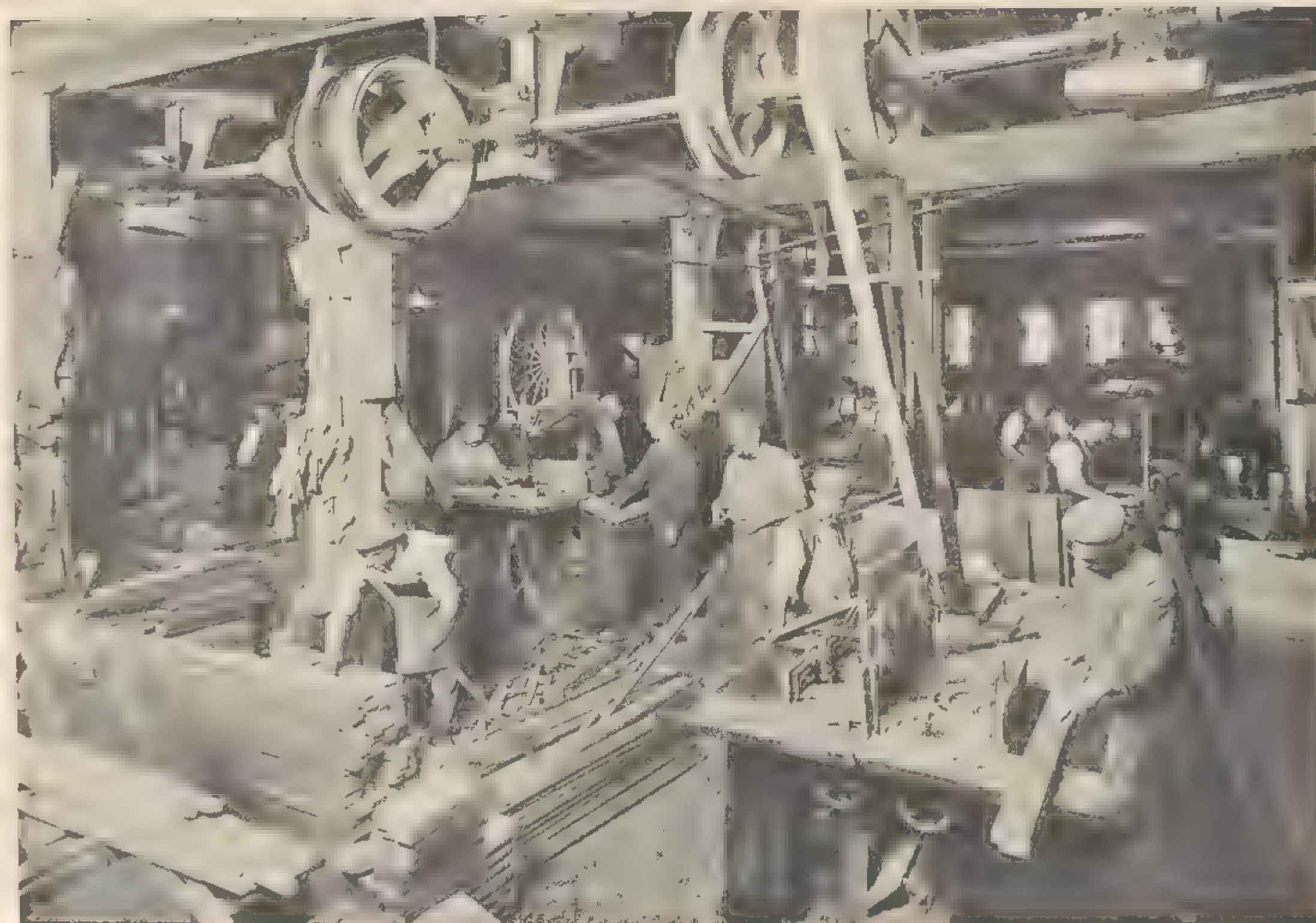


One of the Firm's Timber Yards, Abercrombie-street, Redfern.

and Sons' Cabinet Works, Buckingham-st., Redfern.



The Furniture Factory.



The Machine Shop.

An Australian Industry Messrs. Anthony Hordern and



The Brass Works.



Bedstead and Bicycle Factory.

Sons' Iron, Brass, and Tinware Factories, Redfern.



Tinware Works.



Iron and Brass Foundry.

A TOUR OF ANTHONY HORDERN AND SONS' FACTORIES.

(FROM "TOWN AND COUNTRY JOURNAL"
MARCH 14, 1906.)

NO. II.

"Though I am constantly on my rounds, there are parts of this establishment that I sometimes do not see for days."

The remark, made by the manager of a group of Messrs Anthony Horder and Sons' factories, conveys an idea of the size of the place perhaps more eloquently than a whole yard of reading matter. And it is sufficiently explained by the fact that the buildings over which his supervision extends are four storeys in height and cover an area of 250 by 120 feet, that every one of the 148,000 square feet of this floor-space is in active use, and that there are nearly 200 hands, representing twenty-four distinct and separate trades, employed there.

In the last issue of the "Town and Country Journal" was published the first of a series of articles descriptive of the many large factories each of them in itself an important Australian industry—that have grown up in connection with the great commercial problem of supplying the huge stock required in the business of universal providing as carried on at the Palace Emporium, Brickfield Hill. That article dealt with a visit to a group which consists of the furniture factory and cabinet works, the bedding and upholstery works, and the picture-framing works—three distinct factories. The remarks of the foreman above quoted related to three other large works, equally distinct; the iron and brass foundry, the tinware and general sheet-iron works, and the bedstead factory. Like the others these are located at Redfern.

Upwards of forty men are engaged in the iron and brass foundry, which is built and equipped on modern principles, 100ft square and well lighted and airy being 50ft in height, with access for the daylight from above. All the firm's casting is done here and the latest mechanical appliances used in such work have been installed. The raw pig-iron is raised by a lift to a stage whence it may be thrust directly into the large cupola to be melted, and from which it goes to the moulds, as required. All the machinery is belt-driven from a main shaft over 300ft in length. To endeavor to enumerate all the articles cast here and the wonderful variety of moulds that are required, would be a futile task, but among them are cast-iron baths (of which alone some 1200 per annum are required), stoves, register grates, iron columns, the iron frames of garden seats and a diversity of other articles. The iron baths which weigh about 30wt each are cast four at a time. The handling of the castings is facilitated by an overhead "traveller," which has a lifting capacity of three tons. In that portion of the foundry devoted to brass casting may be witnessed the latest methods of moulding all kinds of taps and plumbers' other brass fittings, the pneumatic crucibles of molten brass, with greenish-white flames emerging from them, having a beautiful appearance as the hot liquid metal is poured into the earthen moulds. Great care is exercised in this casting, for as the tap work has not only to be made to standard gauges, but everything is submitted after testing to the Water and Sewerage Board before sale. It may be mentioned that the heat required to melt brass is said to be something like 1400 or 1500 degrees while about twice that heat is required to melt iron.

Thousands of designs, all useful, most of them ornamental, in wood or plaster, are to be seen in the pattern-shop which adjoins the foundry. Some of these designs are in process of modelling others may have just been completed. For everything that is cast, patterns have to be made, as well as for many other articles such as the ornaments, details of steel ceilings which have to be stamped out by dies to make which patterns are first required.

Later, when visiting the sheet iron department, these great dies are seen at work, on the steam hammer principle, stamping their patterns on sheet iron with 17cwt blows. Ceiling centre-pieces, dadoes, cornices, mouldings and everything relating to ornamental metal-ceiling work is thus produced. In another portion of the building is a machine for painting these stamped metal sheets, the invention of the firm's own staff.

Best driven forges and pneumatic power hammers are features of the equipment of the general blacksmith's shop, while miles of iron rods and bars are constantly being converted into all sorts of tools for masons, bricklayers, plumbers, and other artisans, or into garden implements, horse-shoes, gate hinges, or a thousand and one of the other articles into which iron is usually fashioned. The perfect control, as regards both speed force, and in other respects, which is exercised over the big pneumatic hammer, is little short of wonderful.

Passing through to the main machine shop, one sees a bewildering variety of work in progress, and a veritable maze of machinery in operation. Here a guillotine, with a blade 6ft long is snipping length after length from galvanised iron sheets, with rather less noise and effort than accompany the cutting of sheet of paper by a sharp pair of scissors. There, a press consisting of a horizontal bar suspended by elbow pointed rods, alternately raising and descending gently squeezes strips of sheet iron into lengths of roof guttering. Tabs, but also sheep troughs, watering pots, ridge capping—every conceivable article made from sheet iron, has its different parts cut out and stamped into shape in this shop. Some very interesting machinery is used in the manufacture of canisters. An operative will "feed" a canister press with sheets of tin from which by blows representing a pressure of many tons, the press at one time cuts out and stamps into shape such articles as can lids, cake tins, the necks of soap pails, the sides of spittoons, pudding tins, tin plates—in fact, the most simple or the most complex form, as required. Owing to the intense pressure the metal comes out with deep wrinkles where it has been forced into its new shape. To remove these, and to trim and wire the edges, there are other machines which eventually turn out the sheet metal goods in a style that probably could not be improved upon in any part of the world, the whole operation, from first to last, probably occupying half a minute. The lids of bliny cans, and other similar things are struck, not only at one blow but from one piece.

"How many separate and distinct articles do you make here? Is it possible to tell?" asked the writer, as his eye wandered over the wonderful variety of products in the machine-shop. "Well, three years ago we were making over 1500, in the whole establishment, but I suppose to-day we turn out considerably more than 3000," replied the foreman. "And then, of course," he added, "we make each article by the thousand." As exhibiting the diversity of the work, several boxes of meat-hooks lay beside a lawn mower, and next to this, again, a heap of fancy garden gate hinges. Further on were some parts of chaffcutters (which by the way, the firm makes throughout). Then came a large box of brass watertaps, some copper globes, for cisterns, ornamental iron gates etc. The capacity of the engineering section of the machine-shop is shown by rows and rows of lathes including one which is capable of receiving anything up to 8ft long, and 6ft 6in in diameter, by planing machines (applicable to anything not more than 1ft long and 3ft 6in wide), which take shavings from iron just as readily as a carpenter's plane shaves them from soft wood, by a wheel-cutting

machine and a wide collection of other modern power-driven engineering tools. Primarily, this branch exists to make or repair all the firm's plant, though other work is done as well. A couple of large machines were being made for a manufacturing firm at the time of our representative's visit.

Perhaps the most interesting appliance in the whole of the machine-shop, and the most strikingly emblematic of advancement in modern methods, is a capstan lathe, for finishing off the castings of brass water-taps. The finishing process used to occupy a skilled workman over half an hour besides using up many files. Now a youth, with the capstan lathe, does the same work in one minute, boring the tap, cutting the thread and screw-cut, and filing off the whole roughness of the general outline, so as to leave the tap bright smooth, and shapely. The machine derives its name from the fact that it consists of a number of different tools, affixed in rotation on a capstan, which may be turned at intervals, so as to bring first one and then another to bear on the work. This is only one of a long line of lathes for various kinds of work.

A self-contained establishment is the bedstead foundry, the whole of the plant of which not only was made, but was so designed, by the firm, and on the premises. About 70 men are employed here. In the production of every variety, from the common stump bedstead to the elaborate four poster and the Italian bedstead. From here, many hundreds probably thousands, of bedsteads, have been supplied to the Government, for various institutions. Casting, wrought iron work, and every stage of the manufacture is done on the spot. A separate room is devoted to the finishing process. The best work is enamelled and polished, similarly to the high finish of a bicycle frame. Other work is only japanned and "stoved," that is, dried in hot rooms, at from 300 to 400 degrees temperature. A portion of the staff is also at work lacquering the brass rails, etc., of bedsteads in order to preserve them from the danger of tarnishing.

For convenience of "stoving," in the hot rooms, the department for enamelling and japanning such goods as steel travelling trunks, baths, cash boxes, household cast-irons, and similar articles, is located in a gallery above that where the bedsteads are enamelled. Each of these things is "home-made," from start to finish, even to the brass clasps on the steel travelling trunks (a big business is done by the firm in this line). Sixteen enamel of very fine colors is used, some fine effects being produced, and after every process each article is stoved for 24 hours.

What is called the Birmingham room is a long and busy shop, to which the men in what are called the Birmingham Industries (including almost everything in the hardware line) have been located. Here are to be seen tons and tons of brass and iron castings of every description, waiting to be finished off, and others that have been finished. Here are built bicycles, with all B.S.A. parts which the firm claims are equal to anything in the world, nothing but the highest grade fittings and workmanship being used upon them. Not only the ordinary "push" bicycle, but the motor cycle is built here and, in addition too, to new work, a very big section is devoted to repairs. Truly, plenty of attention has been given by the firm to the demands caused by the modern craze for cycling and motoring. In the Birmingham room, regarded with almost reverence, is still kept the first old lathe, with which, when the staff actually only consisted of the proverbial man and a boy, the establishment was founded. Very poor and simple it looks beside the long

lines of modern lathes, with their intricate mechanism.

To describe each branch of the factories in detail would necessitate an expenditure of time and space equal to that required in the writing of an old-fashioned three-volume novel. Something interesting and strange arrests the attention at every step. In the polishing room, metal goods are being burnished upon revolving "bobs" of felt and cotton, whirling, with enormous velocity, at the rate of thousands of revolutions per minute. The stove-making department, or assembly room, where the cast and stamped sections of stoves are put together the general tinware division, where everything from a tin pannikin to one of the firm's modern water-heaters is made the trunk making department, the branch where wire spring mattresses are made the general wire netting department, where everything in the wire, be from a mouse trap to a garden arch or flower stand, or from a parrot cage to a fish trap is fashioned—each of these departments has its own special machinery, which is of no use, except for its own particular purpose. There are five machines for weaving wire mattresses, and they are most ingeniously constructed. They send out ply after ply of wire in cork-screw-like form each ply weaving into the one ahead of it, until the mattress is made. Only the best lined steel wire is used, and the consumption per annum must run into thousands of miles of it. Another interesting appliance is the belt-driven planish or hammer, in the copper-smiths' department, by which, under the influence of thousands of blows, household copper-pans are hammered into shape. A large stock of copper is kept on hand, in thick slices, about 8ft by 4ft. The ordinary visitor is interested too in the galvanizing department, where such articles as buckets, water-bags, cans, etc., which have been made from ordinary black sheet-iron, are first "pickled," to clear off all impurities or rust, then dipped in a large bath of molten zinc, and finally plunged into water, the last operation giving them the well-known frosted appearance which galvanized articles exhibit.

Only a visit to the pass could afford any possible conception of the amazing variety of operations conducted under its roof yet, where confusion inexorable might be expected, everything is governed by perfect order and systematic arrangement, so as to ensure economy in manufacture and in handling. Following is a list of the separate trades carried on in the three factories under notice: bicycle makers, blacksmiths, brassfounders, brassfinishers, bedsteadmakers, black-iron workers, copper-smiths, die and tool makers, engineers, galvanised iron workers, galvanisers, ironfounders, japanners and enamellers, patternmakers and modelers, polishers and lacquerers, tin-smiths, trunkmakers, steel-coring makers, stampers and piercers, stove-makers, spring mattress makers, zinc workers, plumbers, and gasfitters, wireworkers.

An enormous stock of material, too, is kept in a special iron yard in Castlereagh-street. Pig iron, sheet, and bar metal all being represented. Besides, the firm has to keep large stocks of the other metals most commonly used: Aluminium, silveroid, brass, copper, German silver, zinc, lead, antimony, and steel. Rarely do these stocks run below an aggregate weight of 2000 tons.

Where do the hundreds of thousands of articles made yearly in these factories all go to? one is tempted to ask—for it is difficult to realise that there is a sale for them all, even in such a vast business as that at Messrs. Anthony Horder and Sons' great store. Truly the capacity of the people for wearing out things must be something beyond the scope of realisation.



The Redfern Iron Works.

A TOUR OF ANTHONY HORDERN AND SONS' FACTORIES.

Marble and Slate Working What Can be Done by Machinery.

FROM TOWN AND COUNTRY JOURNAL
OF MARCH 21, 1906

NO III

In our two previous articles, describing a tour of some of Messrs Anthony Horder and Sons' many factories, it was made unmistakably clear that the ramifications of this vast business have interwoven themselves through and through the commercial and industrial fabric of the State to an extent of which the public has no conception. No spreading chestnut tree that ever yet grew could cover one twentieth part even of the Palace Emporium "anthony" and Longfellow's interesting artisan with the brawny arms would be altogether out of date beside even some of the minor appliances in use, yet how many people ever think of Anthony Horder as metal workers? It has been shown that the firm will with equal readiness and facility, build a motor cycle or manufacture a meat hook, frame a picture or furnish a mansion, make a church pulpit or a child's stool. The resources at hand in this wonderfully equipped establishment are practically endless.

There are some things the firm has not yet done. So far, it has been content to cater for the requirements of the individual from the cradle to old age. It has left others to add to him at the grave. Therefore it has never come into competition with the undertaker or the monumental mason. But it has come close to the latter, with the large and modern marble and slate works and masonry yard, established about four years ago at Elizabeth street, city. This is the youngest of all the groups of industries represented by the name Anthony Horder and Sons, but, as in connection with the others, whatever is done there is done according to the latest methods and totally upon a scale which ensures economy in production.

Ordinarily there are about twenty-five operatives at work at this industry. But the amount of work done cannot be estimated merely by the number of men engaged upon it, for, as was the case in the other factories visited, the best use has been made of mechanical inventions of a labour-saving type and these increase the output enormously. Huge floats are used, that grind a surface upon a sheet of marble in a few hours, which would be attained only after days of laborious rubbing by hand. The cutting of blocks of marble by a machine-driven frame-saw, too, effects great savings in material, as well as in time and trouble. Great rough blocks varying in weight up to four tons are by means of this frame-saw, cut into slabs of any required thickness down to half an inch or less, with hardly any expenditure of human labour or attention. A 10-ton block could just as readily be cut up in this way.

Nothing could be simpler than this apparently almost impossible task of sawing marble. The saw used is an altogether different kind of implement from that which the suburban householder ordinarily uses when mending a pigeon

house. A remarkable fact about this wonderful saw is that it has no teeth. It is simply a long narrow band of thin iron with a perfectly straight, smooth edge. Its cutting power is due to the fact that wet sand is constantly being applied by the frame-saw attendant, and the thin iron edge, rubbing backwards and forwards incessantly, cuts a groove which is gradually worn deeper and deeper by the action of the sharp, gritty sand, until a thin slab, with a smooth and level face, has been cut from the main block. As a rule, the big frame in which the sawblades are adjusted, "Ben Hur" the workmen have christened the ponderous machine, holds a number of them which work in parallel grooves, and so saw the block of marble, at one operation, into such slabs as are required for whatever work happens at the time to be in hand. No infrequently as many as 18 blades will be cutting the block simultaneously. The wearing process, of course, is a slow one. As the great iron frame, with its array of iron blades each about 8 ft. in length, grinds constantly on and fro, the impression that is made is unperceptible. The depth of cut, of course, varies according to the hardness of the marble; in some cases three inches per day is regarded as fair progress.

The thickness of the slabs usually varies from half or three quarters of an inch up to two or three inches, according to what they are to be used for. From the saw bed they are taken to the masons' "benches," or working benches. By the use of a coping tool, many are then roughly cut to the shape required for such places as the tops of washstands, for lavatory tables, mirrors, mantelpieces, hall doorsteps, butchers' slabs, the veneering of shop fronts—any of the work, in short, for which thin slabs of marble are used. Here, again, the cutting action of sharp sand is brought into use. After these thin slabs have been thus roughly cut to shape, they have their edges evenly ground upon what is known as a "float." These floats—there are four of them in use—are large horizontal iron tables, which revolve at a high rate of speed. Sand and water are constantly sprinkling upon the surface, and as the piece of marble is held edge downward upon the sanded iron surface, it is worn away until the fracture-marks and bruises made by the chisels have all been rubbed out, and the edge is reduced to the requisite limits of measurement. Pieces of wood fixed across the float, hold the marble in position, so that the rubbing shall be done truly and accurately. Should there be any irregularity about the main surface of the marble, as originally sawn from the principal block, it is given a turn face downward on the float, and the saw marks taken out, preparatory to the polishing operations that in most cases are to come afterwards.

A word or two as to the methods of polishing marble may make it easier to understand what follows. An examination of the surface of the marble after the sanding operation is over, will show it to be roughened by myriads of small

white marks, really bruises in the marble, caused by the crushing of the harder grains of sand against its surface. To remove these it is necessary to submit the marble to a process of rubbing with a soft fine-grained stone, known as "first grit," which cuts out these small white marks, but leaves in their places innumerable small scratches. Another stone, called "second grit," of still finer grain, is next used, and this removes the scratches, though it leaves others in their place, which, however, are scarcely perceptible. The marble has by this time attained a surface which is beautifully smooth to the touch, but is quite dull, and absolutely devoid of any polish. A stone of a smooth soapy texture known as "snakestone," is next used. This takes out the last scratches and gives a very dull polish, and prepares the surface for the application of putty-powder which is rubbed on by means of a Hannel wad and which effects the brilliant polish to which marble is susceptible. Each of the processes described is, if performed by hand an extremely slow and laborious one. The final polishing is always done by hand. But there are what are termed polishing machines, which carry out the earlier processes of first and second grit rubbing. These are somewhat similar to the floats, but the pieces of marble are laid upon a bed, and carefully levelled up, so as to present a perfectly level surface, then a great revolving rubber, consisting of felt wads, set in an iron frame, worked by a mechanical arm, whirls round and round, grinding the surface with a paste formed of the "grit," or powdered form, mixed with water.

The firm uses a great quantity of coloured marble all of which is colonially produced. It comes from marble quarries at Calcutta and at Boreonore in the Orange district, and is declared by the workmen to be much superior, both in colour and texture, to the foreign coloured marbles. Some of the marbles are exquisitely marked, and wonderfully free from flaws and blemishes, thus rendering it possible to obtain large panels, columns, etc., for fancy work, without any defects in them. All the colours of the rainbow are to be discerned in some of the polished surfaces, while the forms of fossilised shells and fishes may occasionally be traced amid the other details of the limestone deposits. Of the white marble used some is quarried in New South Wales and some is imported. The white colonial marble is very good, and is improving in quantity as deeper deposits are quarried, but for some purposes it is not so good as the "Sicilian" marble which, by the way, does not come from Sicily, but from Tuscany. Probably it will be many years before white marble is discovered locally to approach the snow-white Carrara—which is the best of the Greek marbles of to-day, and from which the finest works of Canova and Michael Angelo were executed—or the Parian marbles from Mount Marpessa, from which the famous Venus de Medici was carved. The quarrying of marble, it may be stated, is rendered somewhat costly by the fact that it is not possible to use explosives, the action of

which would crack and split the stone in all directions, leaving it full of flaws so that wedges have to be used for all quarrying work.

Anthony Horder's marble yards are 150 ft. by 100 ft., a large portion of which is covered by workshops. The store yard is crowded with a great stock of marble and slate slabs, up to 10 ft. 6 in. long and about 6 ft. or 6 ft. broad, and of different thicknesses. Large brick buttresses have been specially built, against which the heavy slabs may lean. There are, too, enormous blocks of quarry-hewn marble, waiting to be dealt with by the frame-saws, as occasion requires. Within, besides the machinery there is a succession of workmen's benches, for polishing and for masonry as well, at which the pieces are shaped before going to the floats, and where the edges are polished by hand after the surfaces have been finished on the rubbing beds. Even with such work as the round "mousing" of steps and the semi-circular edges of marble fenders, the use of a chisel is unnecessary, the shape is ground down on the iron floats.

The same principles both as regards shaping and polishing, are followed throughout. Whether the article in hand be a marble tile—black, white, or coloured square or octagonal—whether it be the shelf of a mantelpiece, or one of the pillars, a pair of columns, of coloured marble, the frame work or the lining of a marble bath, or the shelf of a dressing table—the same methods are adapted. To supplement them, when required, there are other machines—such as lathes, for cutting and polishing circular pillars, mouldings, or "bulls" for decorative work drilling machines, etc. There is, too, a powerful circular saw and a bench fitted with convenient gearing for cutting and candling slabs of slate from which steps and touches are made. On another great lathe such work as the cutting of large ornamental freestone balusters is performed. The whole of the machinery is driven by a 25 h.p. gas engine.

There is scarcely any waste of material in every piece comes in for something, be it only as large as a marble, it is shaped and polished until it becomes a "button" to take its part in the ornamentation, design, perhaps, of a mantelpiece. "Buttons" and "dots" are of innumerable shapes, according to the style of adornment in vogue. Capitals and mouldings, columns richly carved and moulded brackets or panels, some of them consisting in part of beautiful coloured inlaid work, fluted pilasters—all are cut and polished by the aid of lathes or floats if possible, by hand if not, according to carefully-drawn designs. The result is the magnificent marble work which is to be seen in the show rooms at the Palace Emporium on Brickfield Hill, where even the designs of the light enamelled wood art mantelpieces, with recesses and overmantels, that a short time ago were fashionable, have now been reproduced in marble, with much more beautiful effect.



Hercules.

TWO OF THE MAMMOTH MARBLE SAWS, KNOWN AS BEN HUR AND HERCULES, PRINCIPALLY USED FOR CUTTING UP BLOCKS OF COLONIAL MARBLE AT

Anthony Horder & Sons' Redfern Works,

EACH MACHINE OPERATING 50 BLADES AT THE ONE TIME.



Ben Hur.

An Australian Industry—Messrs. Anthony Hordern and Sons'

MARBLE AND SLATE WORKS.

The illustrations on this and the two following pages give glimpses of the Redfern Marble Works, the most complete of the kind in Australasia, where from forty to fifty hands are kept permanently employed. Besides the marble which is obtained from Italy and other renowned European centres, a vast amount of the most beautiful Colonial Marble, in Rouge, Green, Grey and Blue Mottled, comes direct to the works from the Borenore Quarries, in the Orange District of New South Wales. It arrives in large blocks, weighing three tons each, which are sawn into slabs of the desired dimensions, and prepared and polished by machinery for various uses, such as Shop Front Veneers, Pillars, Mantelpieces, Counters, Staircases, Butchers' Slabs, Baths, Tiles, Verandah Nosing, etc. The firm secured the contract for the whole of the marble work in connection with the New University Building, in Martin Place, Sydney, and at the time of writing the grand staircase for those premises is in course of preparation, and when finished and erected will form a splendid specimen of colonial production and workmanship.



The Marble Yard.

Marble, Slate, and Masonry Works, Elizabeth-street, Sydney.



Float Section—Showing the First Process of Rubbing Slabs of Slate and Marble.



Masonry and Polishing Section.

A TOUR OF ANTHONY HORDERN AND SONS' FACTORIES.

Some Sidelights Upon Universal Providoring Clothing Manufacture by Up-to-date Methods.

FROM "TOWN AND COUNTRY JOURNAL"
OF MARCH 28 1906.

(NO. IV.)

Enough has been said in the three articles already published regarding Anthony Horder and Sons' factories to prove that the purchasing public accustomed though it be to express amazement at the colossal proportions of the retail establishment, or Palace Emporium—which is the largest building south of the Equator and is said to be "the biggest store on earth"—has little conception of the real magnitude of the firm's operations. What the ordinary Sydney resident or visitor sees is a massive commercial pile, five storeys in height, covering three acres of valuable land right in the city's heart, to make way for the erection of which eighty buildings were demolished. Truly a contrast this to the structures of the days of Wentworth, who wrote of

"Yon placid bay

Where Sydney's infant turrets proudly rise—
The new born glory of the Southern skies."

What he does not see is the enormous stores of reserve stock that are required to replenish the retail departments after scores of thousands of customers daily have had their wants provided for, or the busy industries, by which in their turn these reserve stocks are continually provided.

Divided into three groups, a description has already been given of eight of these factories. Group No. IV includes the clothing factory and the art drapery and furnishing drapery factory which are located in Sussex-street Sydney, almost within a stone's throw of the main premises.

Established eight and a half years ago the clothing factory has up to the present turned out no fewer than a million and a half completed garments, the value of the work (exclusive of the cost of material) being £240,000. This represents an average in value of £28 250 per annum, and, in number of 582 garments per working day. The wages paid during the eight and a half years amount to £140,000 an average of £16 500 per year. The number of employees, since the commencement has averaged 332 at present there are about four hundred. The furnishing drapery and art drapery factory has been added to the clothing factory. Commencing with 18 hands this factory has steadily grown during the last three years until 28 are now actively engaged. In fact, steady growth is the distinguishing characteristic of every one of the adjuncts of this huge business. Never was a business motto more happily chosen than that of Messrs. Anthony Horder and Sons' "While I live I'll grow." Side by side with the operatives engaged in the different factories, the firm's building staff is nearly always to be found at work, carrying out an improvement here an addition there or an extension somewhere else, to cope with the ever-increasing demand for additional space. From the art and furnishing drapery factories, £6600 worth of work has been turned out, an average of £1320 per year.

The factory, in accordance with the established practice of the firm, has been built absolutely plain but the most liberal provision has been made for light, ventilation, and working space. In connection with this, it is stated as an interesting fact, that visitors from other countries—themselves engaged in the same business—have frequently admitted that they had never seen factories anywhere more thoroughly adapted to the health convenience, and comfort of the working staff.

A large portion of the block of buildings in Sussex-street is used as a bulk store but the factory itself is of five floors and a basement, each of which has an inside measurement of 122ft by 47ft. Ascending by a lift one finds that the fifth floor is devoted to the manufacture of furnishing drapery and art drapery. Thirty power driven sewing machines are used in

the various 'etats' of the work and the number is constantly being added to. Such things as tapestry curtains, holland window blinds, ornamental bed drapings, mantle drapes, and covers for tapestry furniture are made in this department. A special designer and cutter—an artist in his line—is employed in connection with the work of draping. By him the material is hung in the requisite graceful folds cut to the necessary shape, and then passed on to the operatives, who, with the aid of hem stitching, and other machines, sew on lace, tassels, fringe, etc., to complete the work. Of the richest materials and colourings, some of the drapes are very beautiful indeed with cottons, batons, tapes, trimmings, lace of all patterns, and the whole of the varied assortment of articles used in the different sections of the factory are kept in the adjoining reserve store, which serves the purposes of the factory only and which is arranged in such a manner that everything required is most easily accessible from the place where it is likely to be wanted. These supplies are served out as required, and by the work of deft fingers a piece of plain holland is quickly hemmed, trimmed with lace, and adorned by lace insertion, etc. until it bears a perfectly ornate appearance. Mosquito curtains are made in this department and they form a big line. A number of girls too are engaged in making large dolls whose exteriors are of printed calico and their interiors of kapok.

Leaving the art and furnishing drapery factory the visitor descends to the floor below to a section of the clothing factory, known as the coat-room, devoted entirely to the making of coats. About 110 hands are employed in this room and row after row of machines 42 in all—driven at high speed give the place the appearance, as well as the sound of ceaseless activity.

On a big table at the end of the room men are engaged in fitting the pieces of ready cut material together, ready to be sewn on the machines. The cutting is done in a room below, and the pieces come up in bundles together with the necessary linings, etc. which are separated out and the parts of each coat put together singly before they go to the machines. From one to another of these machines the new garment travels in certain routine. Each machine has its own especial work to do and by the time the coat is completed it has undergone nineteen operations. Some of the work is still done by hand notwithstanding that it could easily be machine-worked; hand sewing is found to be superior, and so is adhered to, the machine-stitch only being used where it is possible to obtain good results.

In the next room a floor lower, the work done is entirely confined to the manufacture of trousers and vests. One hundred and fifty hands are employed on this floor, and 56 machines combine to add their whirl and rattle to the busy hum of the factory. Here a fact already mentioned is most particularly noticeable, that is that, although there are so many operatives engaged in one room, the system of ventilation maintains a perfectly sweet and wholesome atmosphere and the light has almost the brightness of the open air. The machinists are seated at eight long tables, each having a comfortable chair in place of the shapeless and hard wooden forms used in some factories.

The operations of making a coat and those of making a vest or pair of trousers do not very greatly differ. First, there is the cutting out to do. This is done according to standard sizes. Then the linings and trimmings are cut and selected and the parts are carefully tied into bundles, with the accessories, according to the sizes and to the material. After being placed in large baskets these bundles pass up stairs to the workrooms, and are "booked out" to the workmen. Certain work, such as putting in pockets, which is of a more difficult character is given to men, while, for putting in linings and sleeves, basting and filling, and much of the machine work women are employed. It is interesting and instructive as well, to see the rapidity with which the swift

fingers twist and turn the pieces of cloth this way and that way putting them together with an unerring precision and speed that could only be attained as the result of the modern system of specialising every small detail of the work.

As previously stated, every machine has its own class of work to perform. One of the most ingenious is the button sewing machine which grasps a trouser-button that has been laid upon the cloth and holds it in position while the needle plunges into one hole, and then another in succession, until, each of the four holes has had half a dozen threads run through it.

Judging by the manner in which this useful appliance does its work, the buttons which it sews on, though each one only takes up a few seconds, ought to defy the best endeavours of even the most high spirited school boy to get them off, by any means short of cutting them. The button hole machines not only cut button holes, but they sew around the edges the time required for each hole being from eight to ten seconds. Then there are tacking machines, which do an extra strong piece of stitching at such places as the corners of trousers pockets where there is much liability of the sewing carrying away in the course of ordinary wear and tear and other machines "too numerous" as the advertisements say "to particularise." A portion of the factory is fitted up as a machine repairing shop, with lathes, emery wheels, etc. and a cabinet extensively stocked with spare parts so that anything which goes wrong may be rectified with the least delay. A staff is engaged regularly on this floor at soaping seams and another one at pressing them and no more eloquent evidence of the volume of work done is required than that furnished by a heap of bars of yellow soap, nearly half the size of an ordinary bill and table, which is kept in reserve for this small branch of the work alone. Completeness of detail in management is shown by the provision, on the edges of the benches of small troughs, which prevent small pieces of soap from dropping on the floor, and so causing discomfort and untidiness. The system provided too, for taking the work round to the workmen is well adapted to prevent confusion and loss of time.

The floor immediately beneath is the cutting-room where the weeds, serges and cloths and linings of all descriptions are received in rolls and are spread out upon very wide and long tables so that the cutters may work upon them to the best advantage, as regards the economical use of the cloth. No fewer than seventeen cutters are constantly hard at work in this department.

It is somewhat of an anomaly, however, that the cutters, as a rule, do not do the actual cutting, that is to say, they are not armed with large shears as in smaller establishments, by means of which they cut out the cloth in single thicknesses. The cutting is done by machine knives which are thin and narrow endless bands of steel nearly 30ft long, with razorlike edges, which pass vertically downwards through a slot in the cutting table and passing round a trio of wheels, revolve at such enormous speed that they cut through a number of thicknesses of cloth with as much ease, and as cleanly as though their passage were obstructed by nothing more substantial than a sheet of tissue paper.

The practice adopted is to mark out the patterns required according to the standards in use upon one spread of cloth, with tailor's chalk. This cloth is then laid upon a number of other spreads forming what is termed a lay. The machine, in order that absolute accuracy in cutting may be ensured, is never called upon to cut more than twenty four thicknesses of cloth at once, though it could just as easily cut double the number, or more. To facilitate the sharpening of these band knives, there are means for the ready adjustment of emery wheels, so that they come into contact with the blade edge as the machine revolves and these emery wheels run upon ball bearings. Enormous stacks of cloth are placed around

the cutting-room, in readiness to be operated upon. There is, too, a staff of cutters at work upon linings, which are tied up to the pieces of cloth, and sent up in the bundles to the workrooms above. Trimmings, etc., of all descriptions are kept handy upon rows of shelves and are brought down daily in such quantities as are required from the reserve room. Nothing is wasted. Even the smallest scraps, that are cut from the edges of the cloth by the machine-knives are put into bins, and are periodically sent in large quantities to England, where makers of "shoddy" are ready to purchase them, to be teased out and made up again into inferior cloth. Needless to say, such stuff is not repurchased.

Thump Thump Thump! In the pressing-room eighteen men are kept continually at work doing nothing else but pressing the new clothing, as it comes down to them from the workrooms above. The pressing-room is upon the ground floor. The irons are heated in a large stove fed by coke, and the bottom-plate of which is usually in a red hot condition. Though the stove will heat sixty irons, the economy of the heating is such that its fuel consumption represents only about 11d per day. In a room adjoining the pressing-room are a number of men who have a thorough knowledge of the whole of the details of the business, and whose work is to examine and test all the work before it goes out. By these, and under the supervision of an expert and careful manager the whole of the garments are examined, tested, sorted into sizes, brushed and folded. A piece of wool is picked out here or a piece of cotton there the inspection being a very minute one. When any defect is discovered the garment is rejected and sent back, to be turned out again properly. The examination for defects, by the way is not only carried out after pressing, there is a similar examination before the clothes go to the pressers, so that should anything be wrong there is but little risk of its escaping detection.

The basement-floor is used as a dining-room, and is partitioned off so as to provide separate rooms for the male and female employees.

A noteworthy feature about the business is that notwithstanding the variety of the output the firm makes almost everything in the clothing line, from mackintosh to mackintosh, and its volume also, everything turned out of the factory is for sale only at the Palace Emporium. What clothing is made by Anthony Horder and Sons is for Anthony Horder and Sons' own customers; they do not sell the products of their factory to any other shop. So great is their output, in fact, that it has been suggested that they should open their own woollen mills; but they prefer not to do so, as that would restrict their range of materials, it is better that they should be able to do as they do at present—take the best material and patterns made by various manufacturers and so obtain a range of choice by which all customers may be suited rather than endeavour to persuade customers to adopt themselves to the comparatively limited range of material that would be turned out by one woollen mill.

A matter which should be mentioned before concluding the description of a very interesting tour of the firm's factories is the good feeling which is both proverbial and apparent, between Messrs. Anthony Horder and Sons and their vast army of employees. There is little reason to doubt that herein lies much of the success that has attended the business, for whole-souled energy seems to characterise everybody from the proprietor to the latest industrial recruit. "Peace hath her victories, no less renowned than war," and Commerce has her industrial armies no less mighty and often far more perfectly organised, than the mightiest machines of militarism. Among these, as an object-lesson to all people of twentieth-century commercial generalship, Messrs. Anthony Horder and Sons stand prominent.



BULK STORES.

The PHOTO. illustrates a scene at one of the MANY
BULK STORES necessary for

THE ENORMOUS BUSINESS

CARRIED ON BY

ANTHONY HORDERN & SONS.

At THESE STORES, situated conveniently near to the PALACE EMPORIUM, TENS OF THOUSANDS of all sorts of packages are received from OVERSEA VESSELS every week. These Stores contain

The Vast Reserve Stocks of the Firm,

which never total LESS THAN HALF-A MILLION STERLING of merchandise from EVERY MANUFACTURING CENTRE all over the world,

Drapery and Clothing Factory.



The Cutting Room.



The Pressing Room.

Drapery and Clothing Factory.



Furnishing Drapery and Art Drapery Room.



One of the Machining Rooms.

ON THE HISTORIC SLOPE OF BRICKFIELD HILL. THE BIGGEST STORE IN THE SOUTHERN WORLD.



The George and Goulburn Streets Frontages of Anthony Hordern & Sons' Famous Store.



The Goulburn and Pitt Streets Frontages——Total Frontage, Over a Thousand Feet.